

FIG.1

٧.

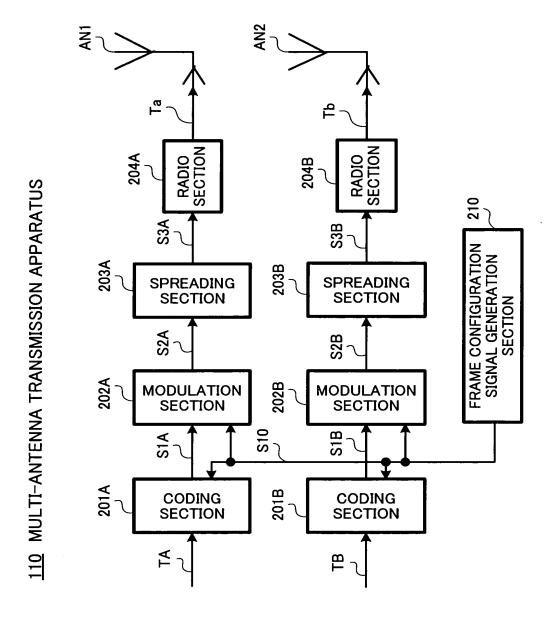
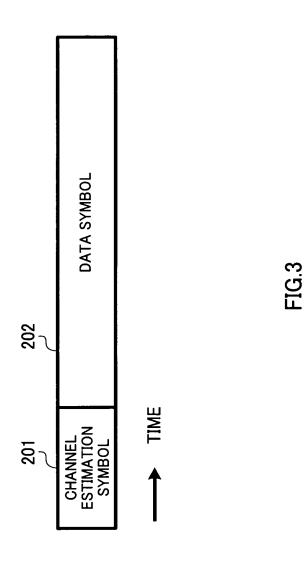


FIG.2



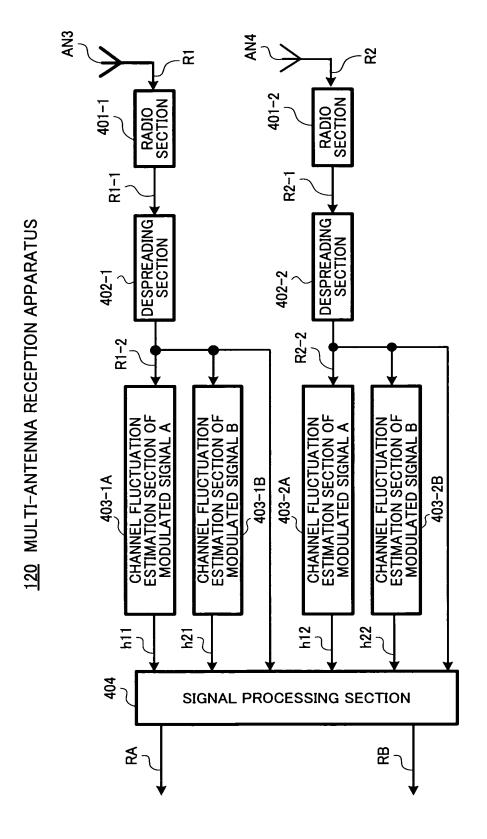
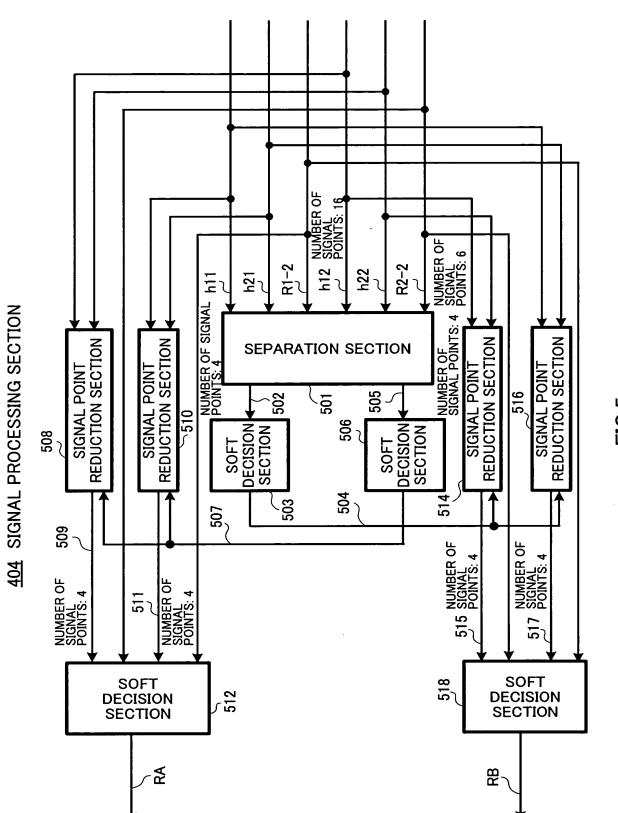


FIG 4

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-IG.5

503 SOFT DECISION SECTION

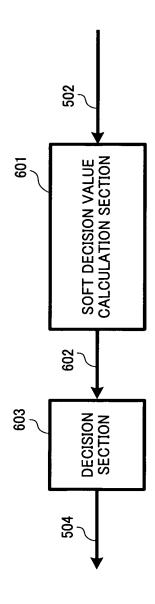
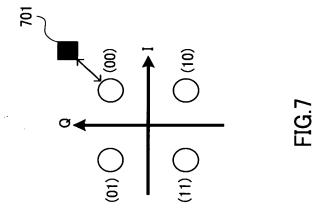
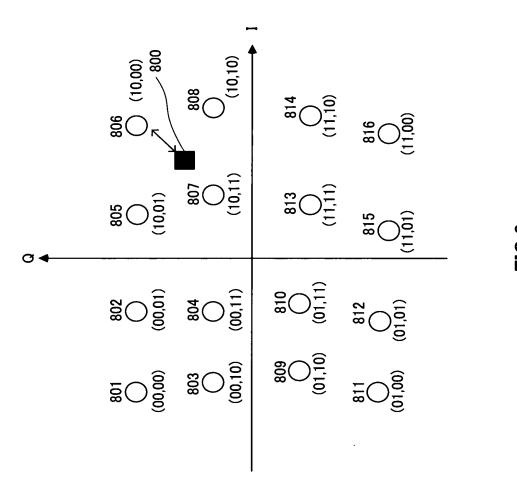
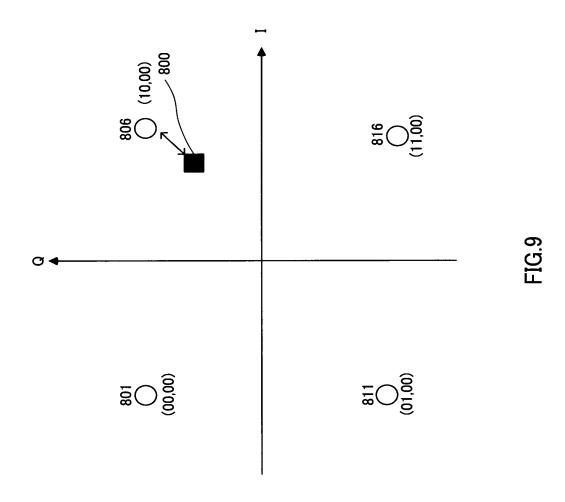


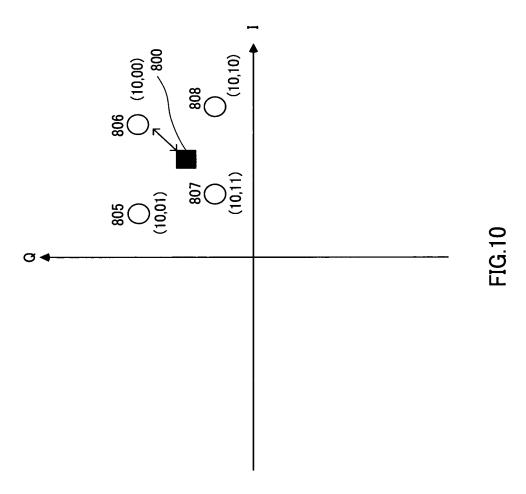
FIG.6





F.IG.8





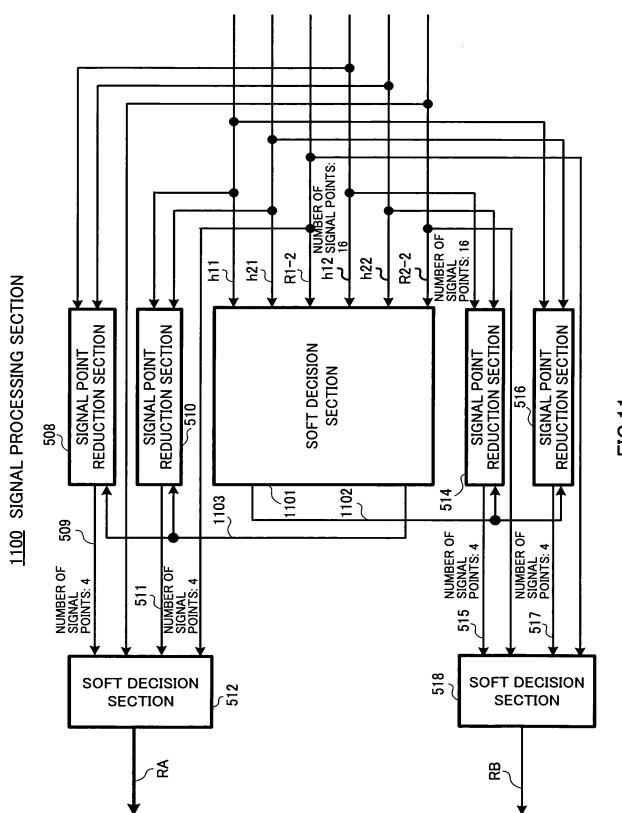


FIG.11

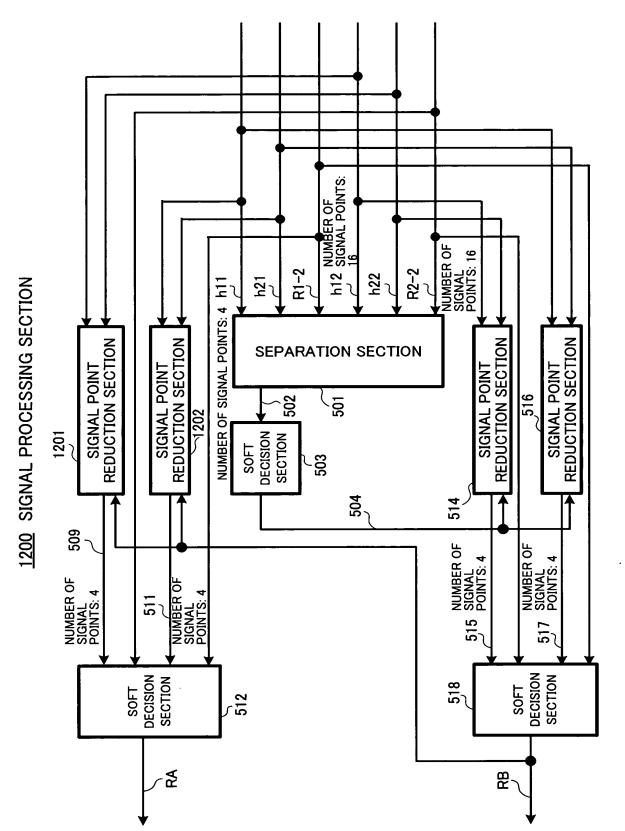


FIG.12

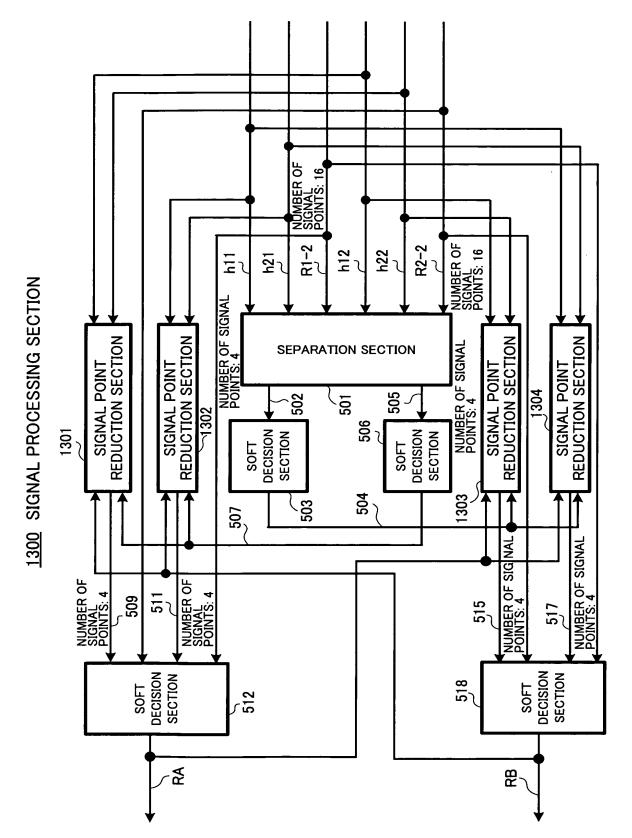


FIG. 13

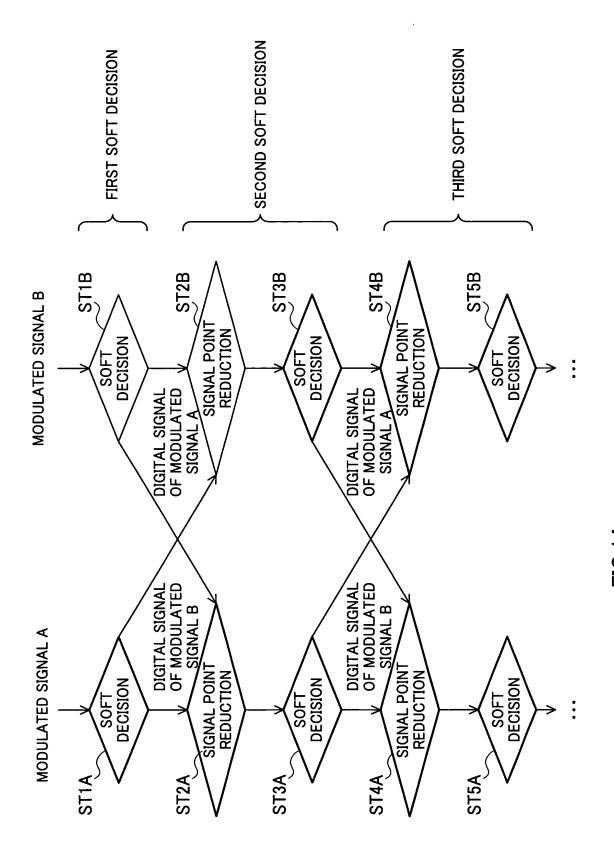


FIG.14

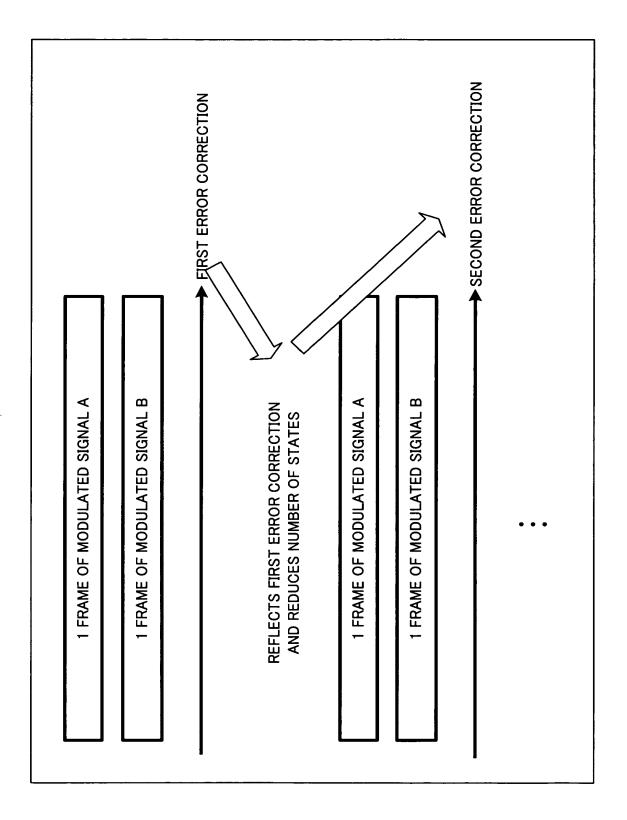


FIG. 15

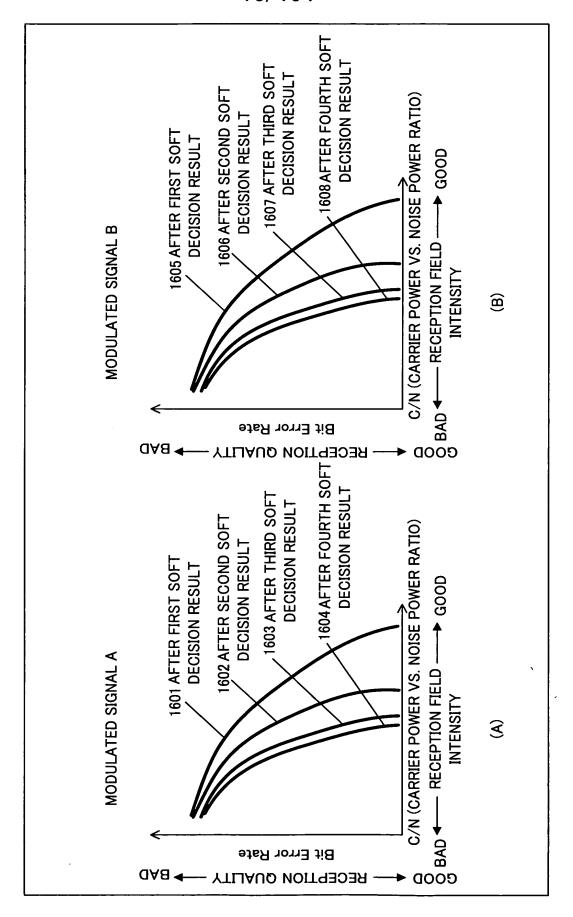


FIG 16

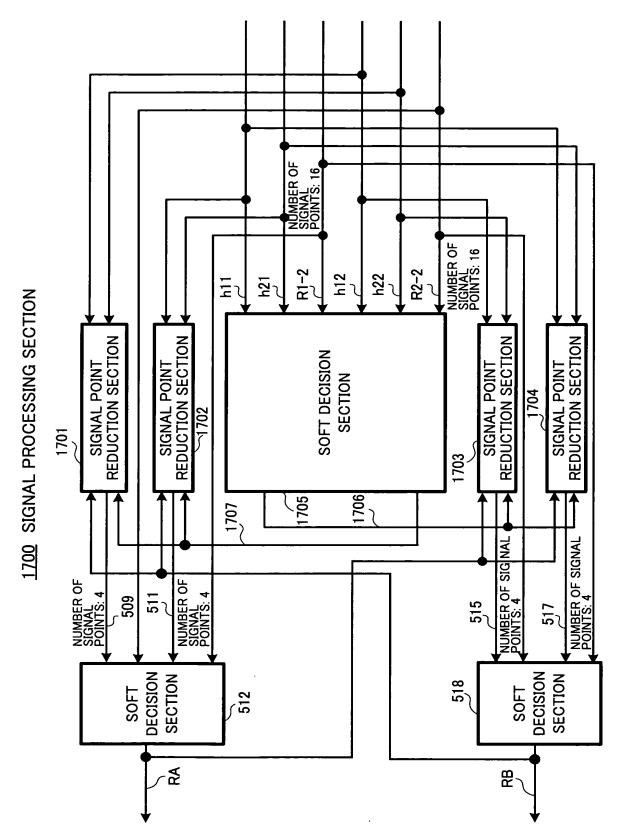


FIG.17

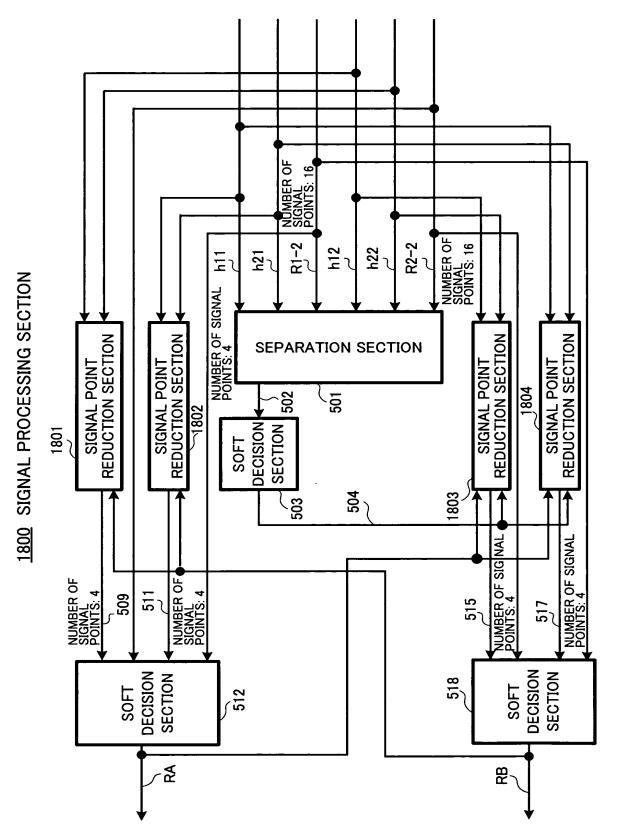
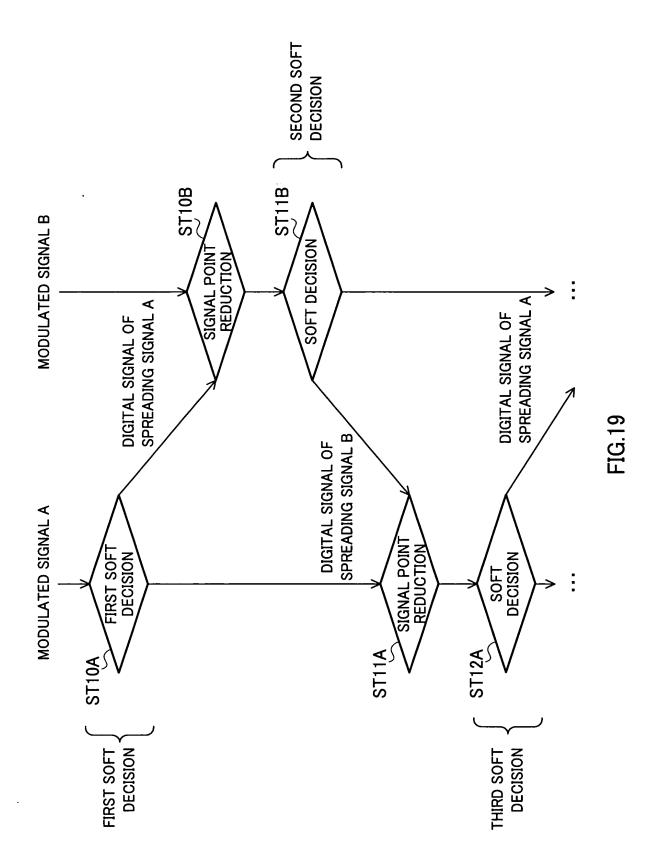


FIG.18



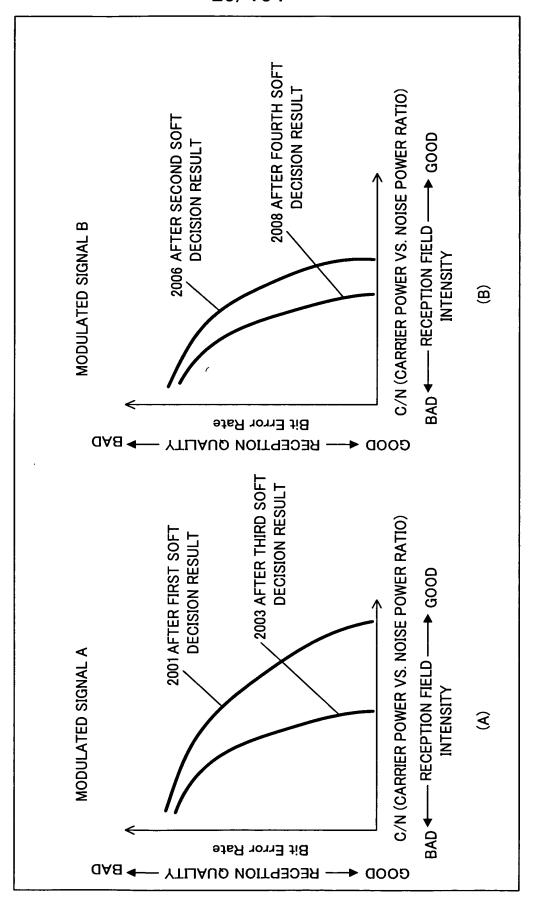


FIG.20

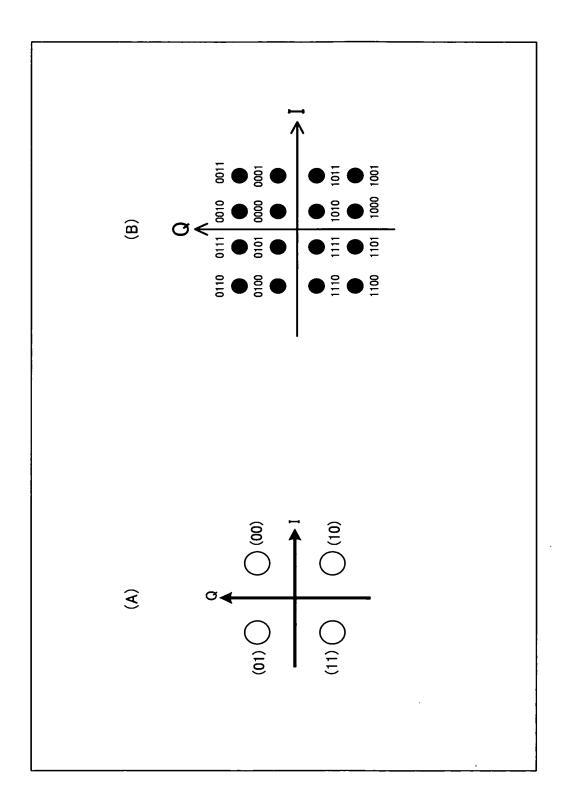
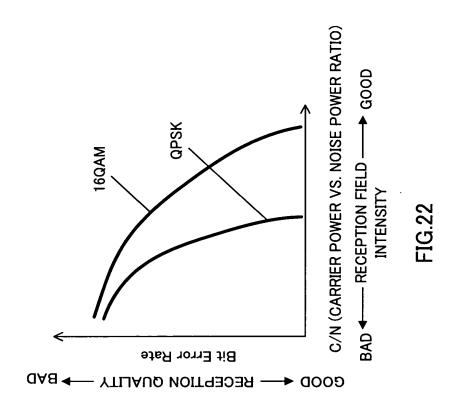
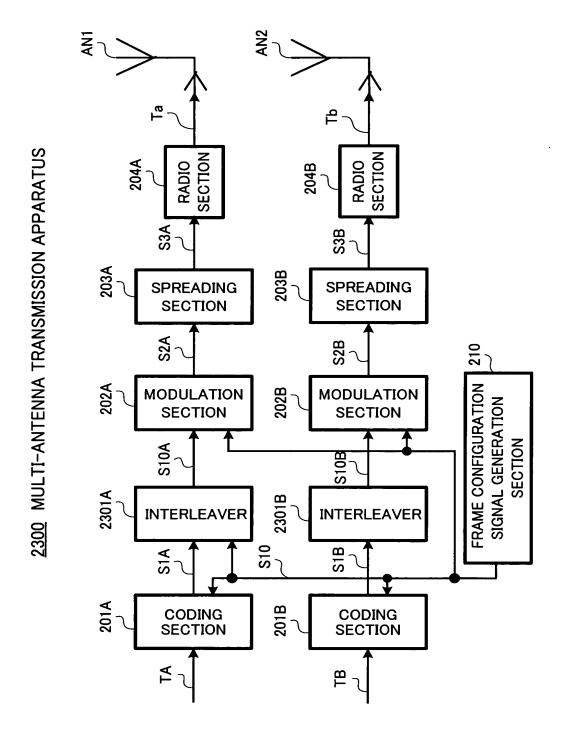


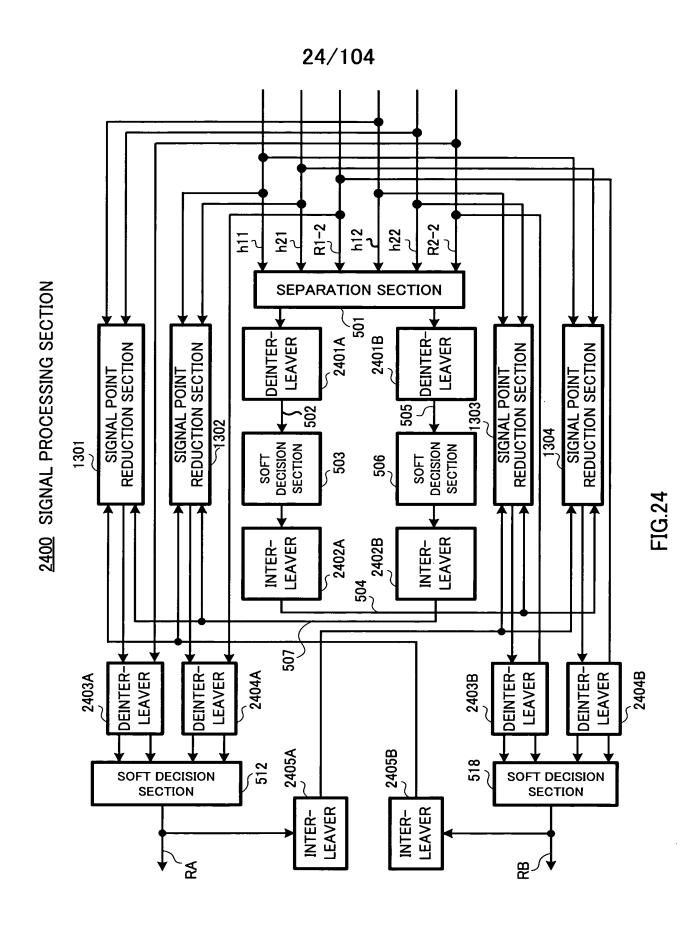
FIG.2





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FIG.23



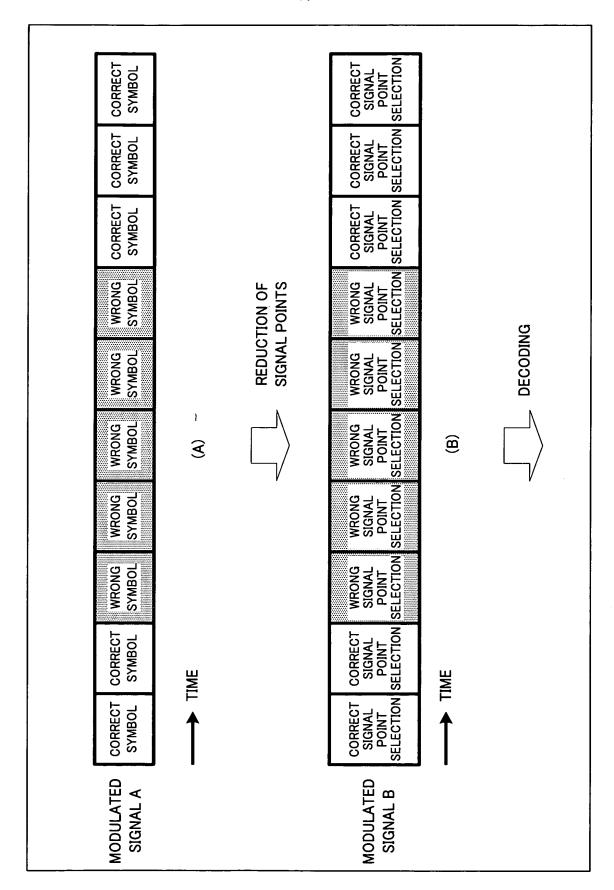
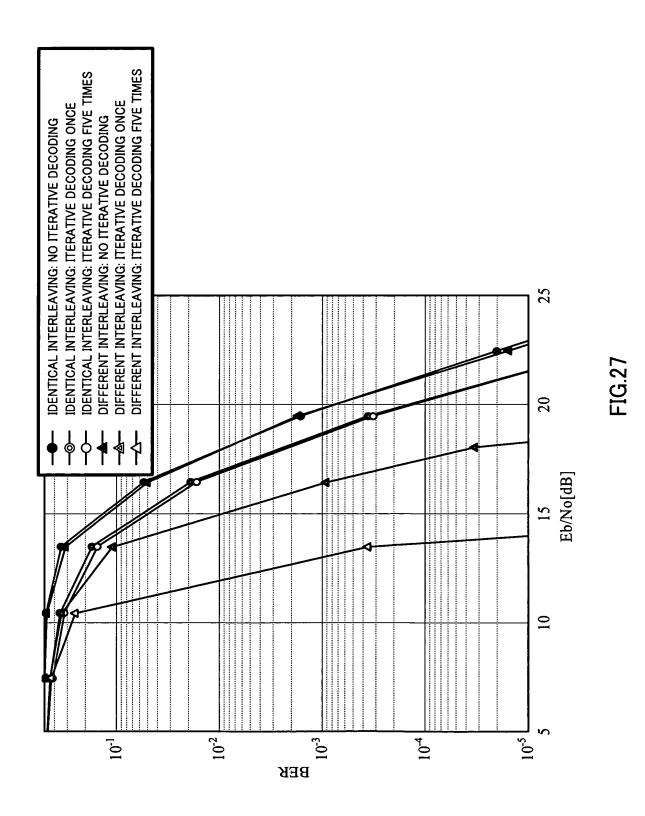


FIG.25

FIG.26



DATA 200 DATA 200	DATA 200 DATA 200
DATA 199 DATA 195	DATA 199 DATA 192
DATA 198 DATA 190	DATA 198 DATA 184
DATA 197 DATA 185	DATA 197 DATA 176
i i	: :
DATA 3 DATA 4 DATA 11 DATA 16	DATA 3 DATA 4 DATA 17 DATA 25
DATA 3	
DATA 2	DATA 2 DATA 9
DATA 1	DATA 1
BEFORE INTERLEAVING AFTER INTERLEAVING	BEFORE INTERLEAVING AFTER INTERLEAVING
3	(8)

FIG.28

DATA DATA DATA 198 199 200 DATA DATA DATA 190 195 200	FA DATA 5 200	
DATA 197 DATA 185	FA DATA DATA 195	6 DATA 11 DATA 16
DATA 1 DATA 2 DATA 3 DATA 4 DATA 1 DATA 6 DATA 11 DATA 16	DATA 1 DATA 6 DATA 11 DATA 16. 185 FREQUENCY OR TIME	DATA DATA DATA DATA 1 DATA 6 190 195 200 DATA 1 FREQUENCY OR TIME
BEFORE INTERLEAVING AFTER INTERLEAVING	DATA 1	DATA 185
(Y	(B)	(O)

FIG.29

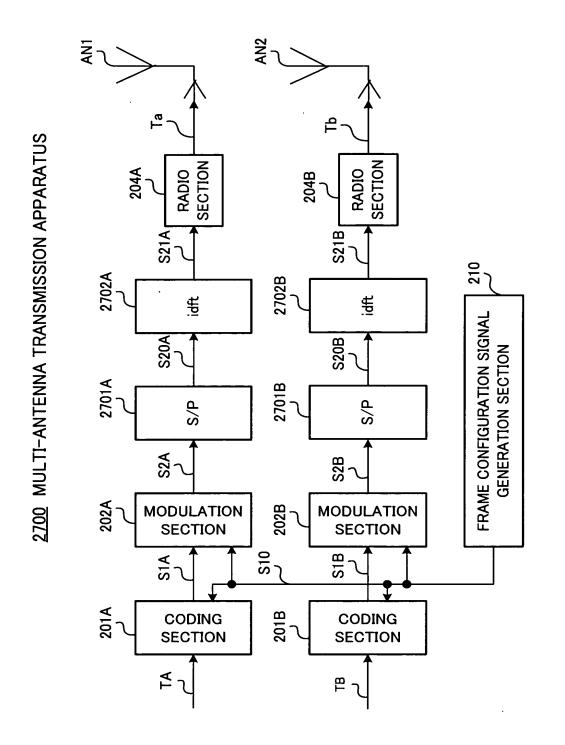


FIG.30

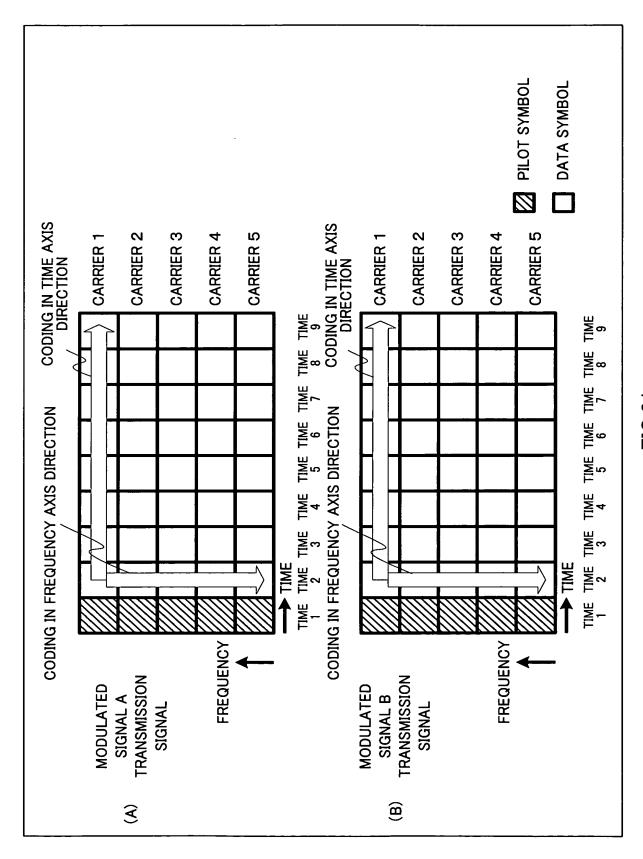


FIG.31

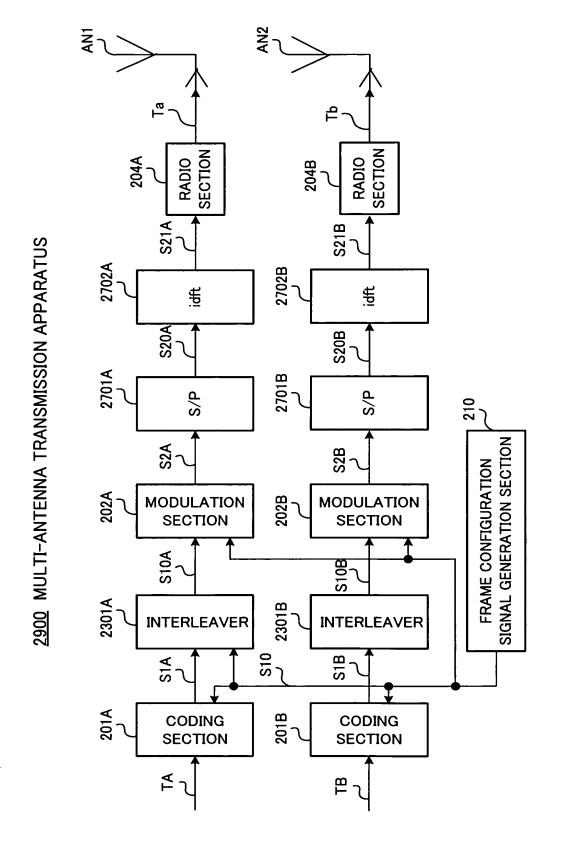


FIG.32

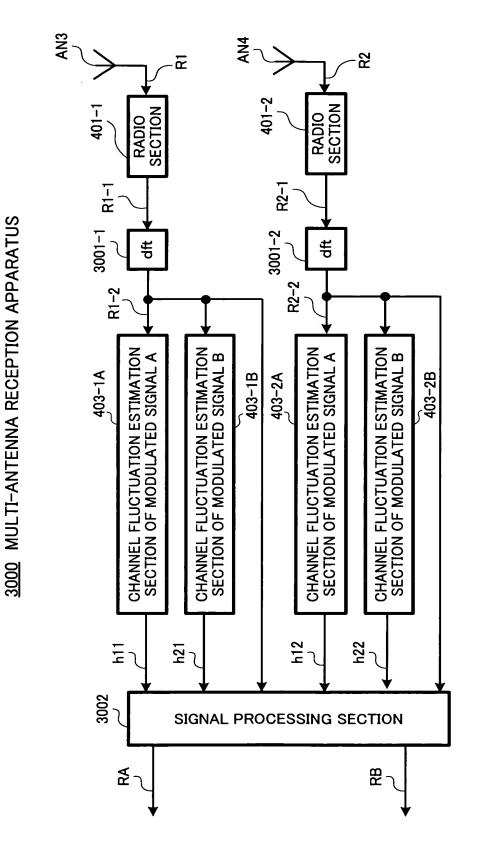


FIG. 33

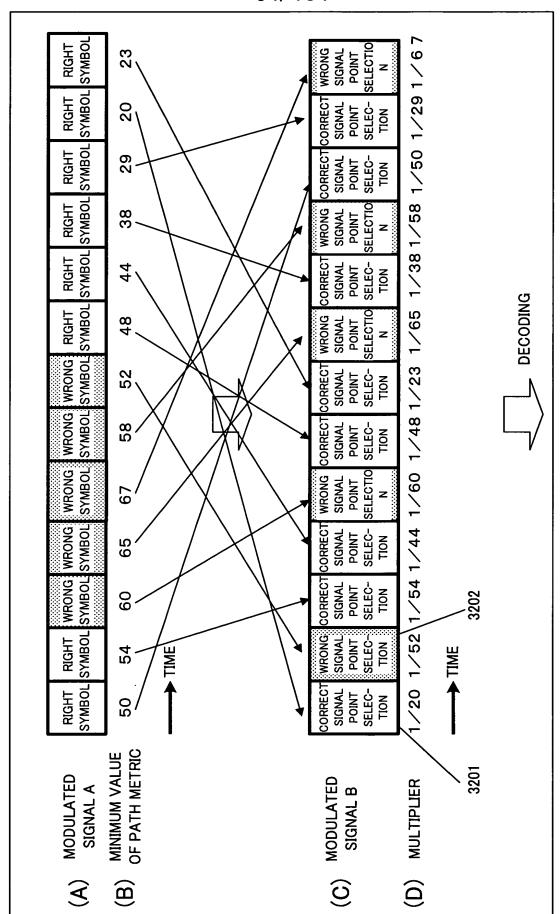


FIG 34

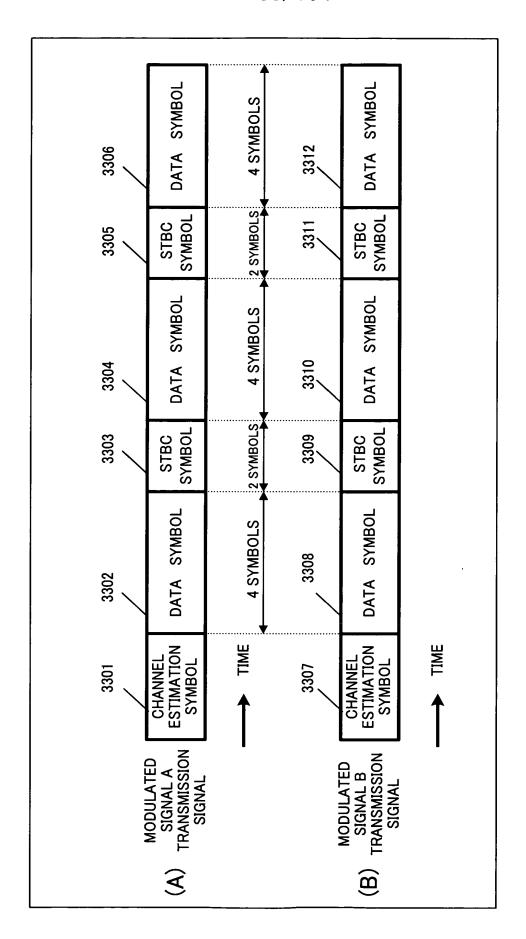
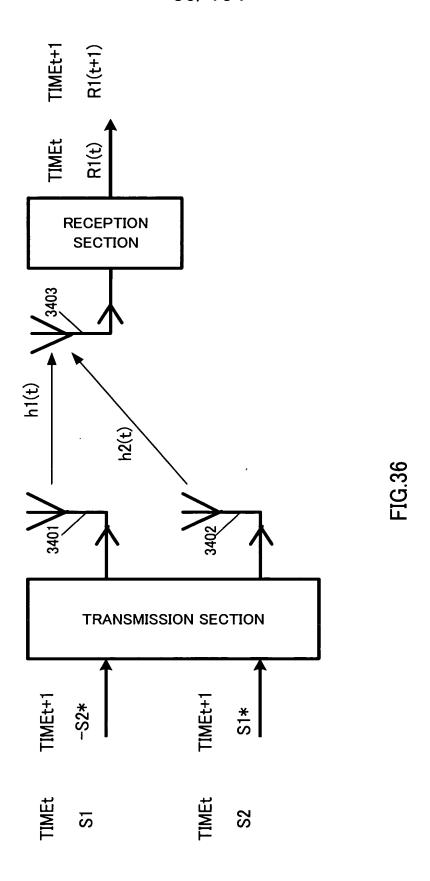
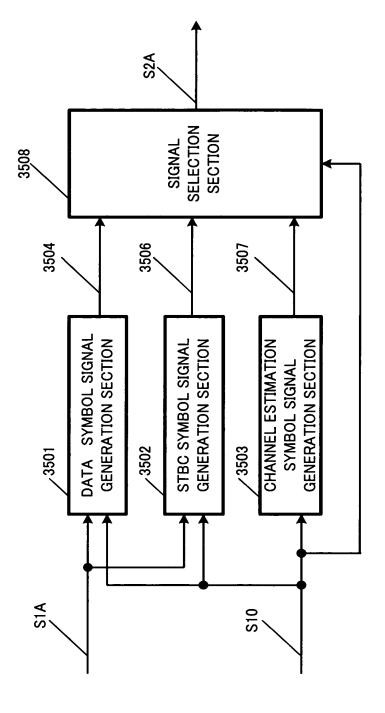


FIG 35





202A (202B)

FIG.37

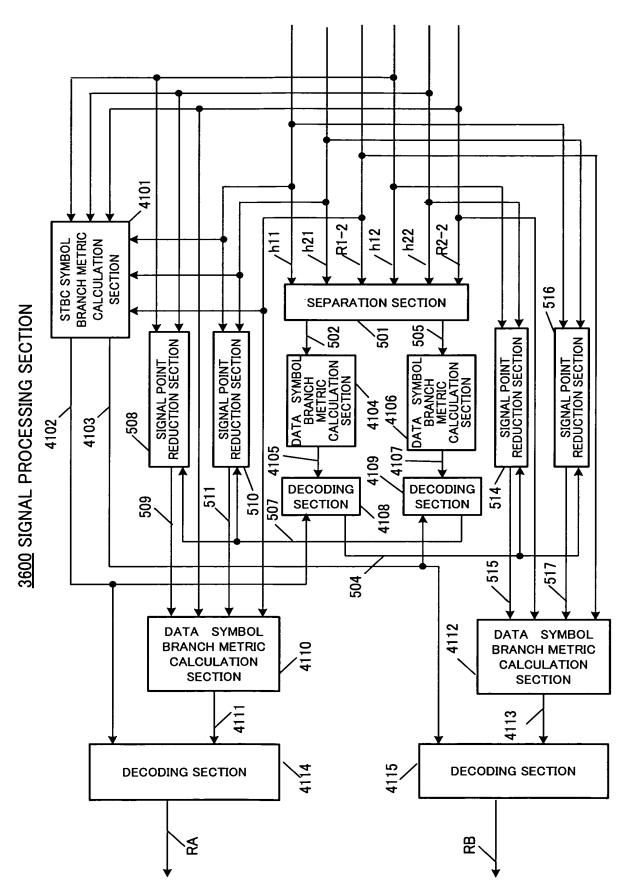
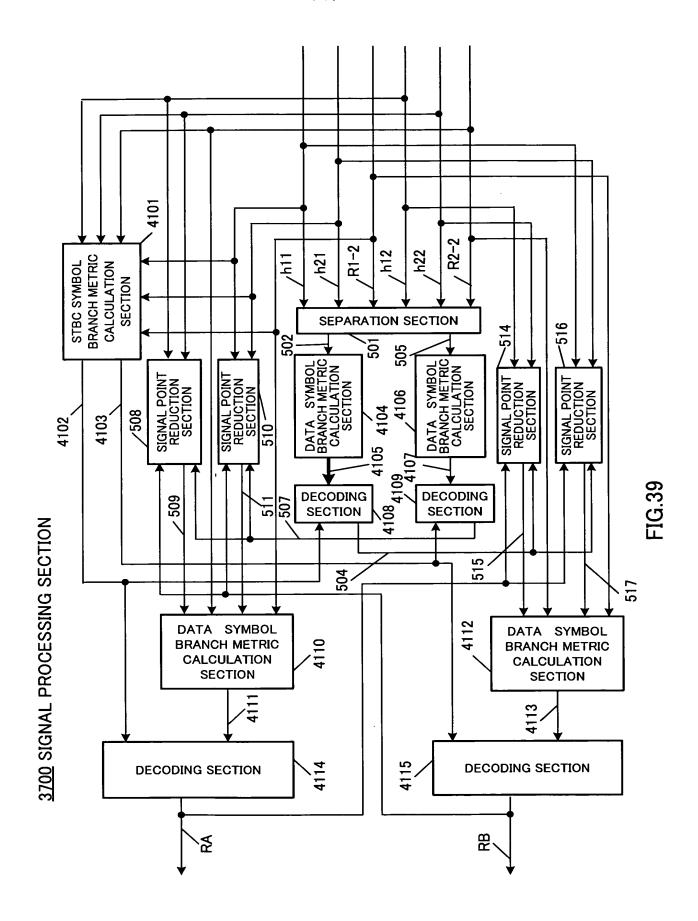


FIG 38



DATA DATA SYMBOL SYMBOL	WRONG CORRECT CORRECT CORRECT CORRECT CORRECT CORRECT WRONG WRONG SYMBOL	SIGNAL POINTS SIGNAL POINTS CORRECT WRONG WRONG SIGNAL SIGNAL SIGNAL POINT POINT POINT TION TION TION
SYMBOL	CORRECT SYMBOL	SIGNAL POINT SELEC- TION UNNECE- SSARY
DATA	CORRECT	TCORRECT SIGNAL SPOINT SELEC- UI TION COMPANDED SELECTION COMPANDE
DATA	SYMBOL	SIGNAL POINTS CORRECT CORRECT SIGNAL SIGNAL POINT POINT POINT SELEC- SELEC- TION OF TION TION TION TION TION
DATA	CORRECT	SIGNAL POINTS SIGNAL POINT SIGNAL POINT SELECTION TION TION TION TION TION TION TION
DATA	CORRECT	CORRECT SIGNAL POINT SELEC- TION
STBC	CORRECT SYMBOL	SIGNAL POINT SELEC- TION UNNECE- SSARY
DATA	CORRECT	CORRECT SIGNAL POINT SELEC- TION
DATA		AL POINTS AL POINTS WRONG CO SIGNAL SI POINT F SELEC- SI TION
DATA	WRONG WRONG SYMBOL SY	SIGNAL SIGNAL SIGNAL SIGNAL SIGNAL SIGNAL SIGNAL SIGNAL SIGNAL SELECTION
FRAME CONFIGURATION OF MODULATED SIGNAL A	MODULATED SIGNAL A ——— TIME	MODULATED SIGNAL B TIME
3	(B)	(C)

FIG 40

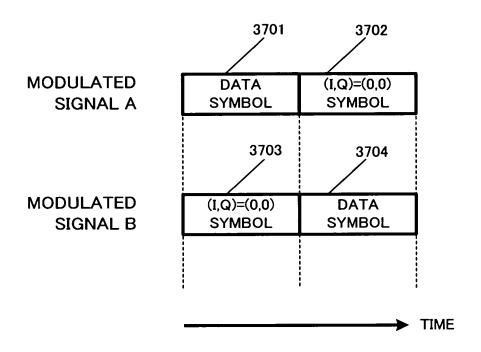


FIG.41

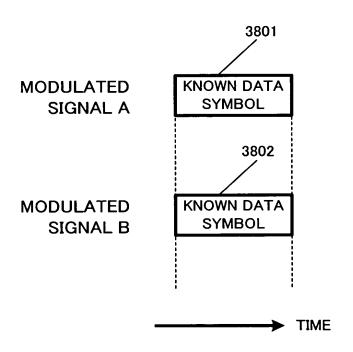


FIG.42

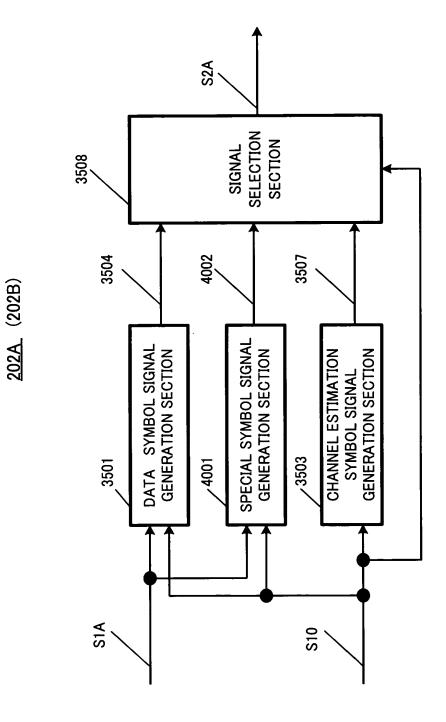


FIG.4

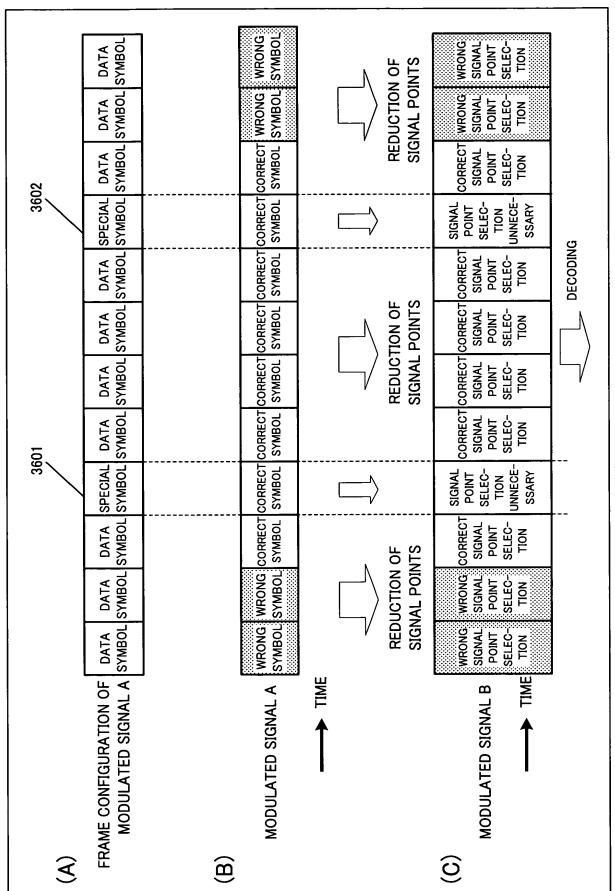


FIG.44

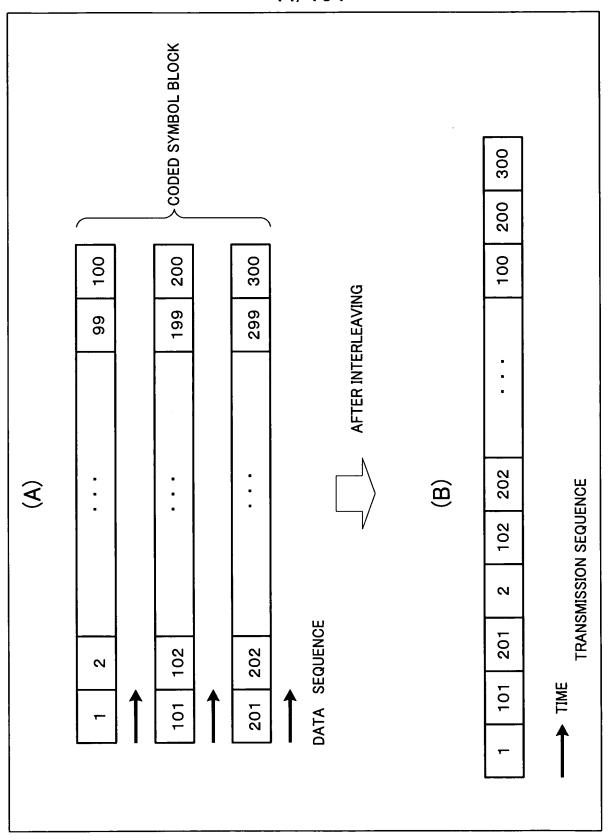
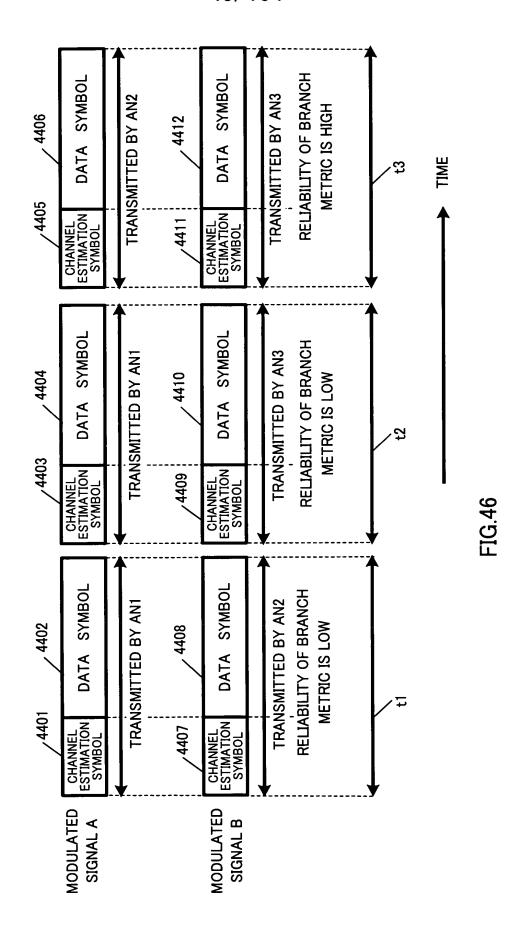
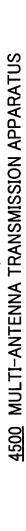


FIG.45





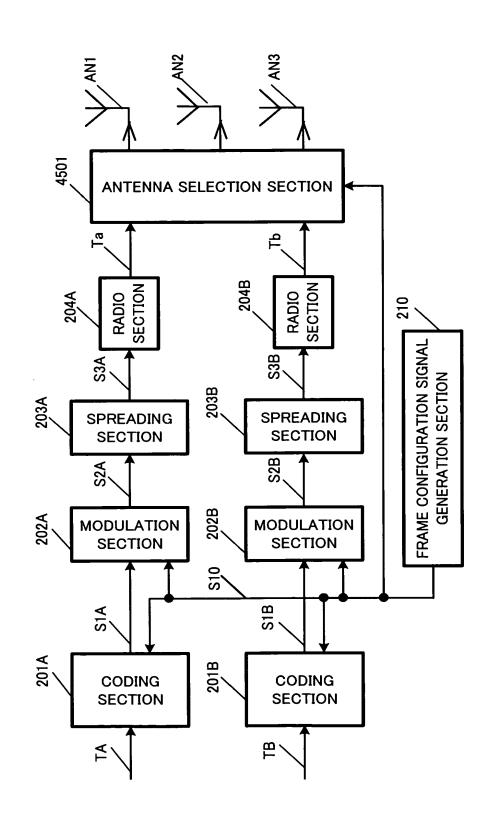


FIG.47

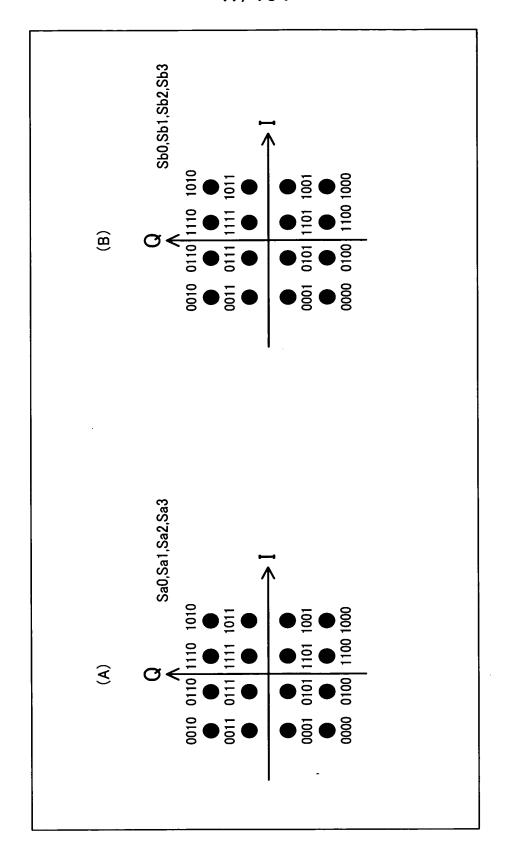
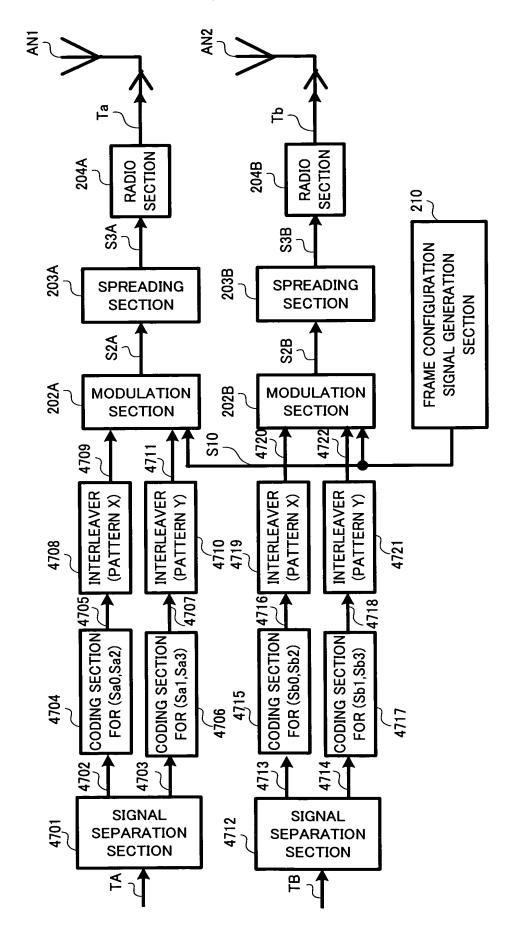


FIG.48

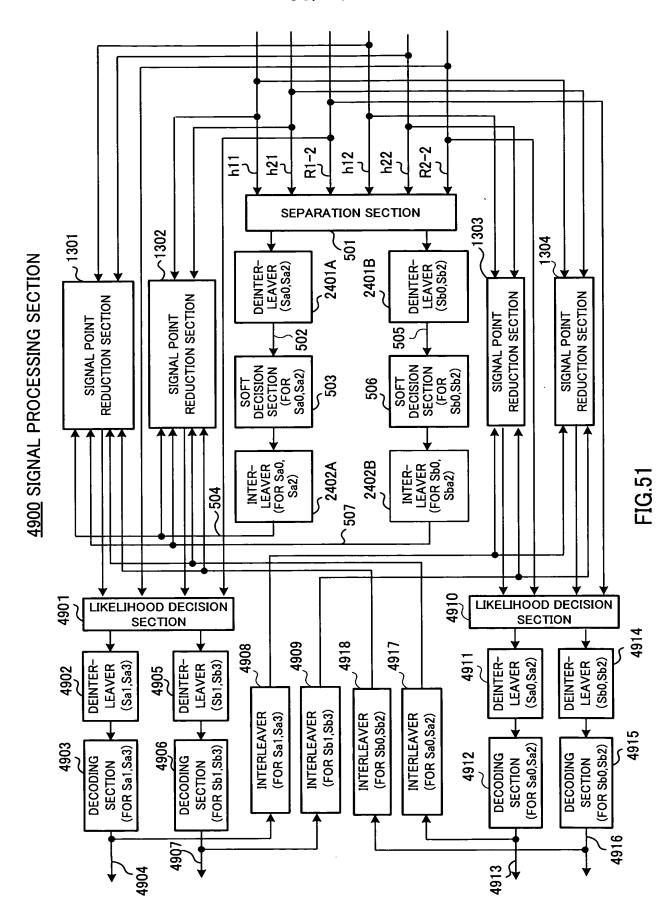


4700 MULTI-ANTENNA TRANSMISSION APPARATUS

FIG.49

DATA DATA DATA 197 200	DATA DATA DATA 185 190 195 200	DATA DATA DATA DATA 197 200	DATA DATA DATA DATA 176 184 192 200	DATA DATA DATA DATA 197 198 199 200	DATA DATA DATA DATA 185 200	DATA DATA DATA DATA 197 198 199 200 DATA DATA DATA DATA	761 401		
<u>:</u>	:	:	:	÷	÷	: :			
Sa0,Sa2 DATA DATA DATA DATA 1	Sa0,Sa2 DATA DATA DATA DATA 16	Sa1,Sa3 DATA DATA DATA DATA 1	Sa1,Sa3 DATA DATA DATA DATA 17 25	Sb0,Sb2 DATA DATA DATA DATA 1	Sb0,Sb2 DATA DATA DATA 16 16	Sb1,Sb3 DATA DATA DATA 1 2 3 4 Ch1 Ch3 DATA DATA DATA	6		
BEFORE	AFTER INTERLEAVING	BEFORE INTERLEAVING	AFTER INTERLEAVING	BEFORE INTERLEAVING	AFTER INTERLEAVING	BEFORE INTERLEAVING AFTER	INTERLEAVING		
MO		SIGNAL		M		ED SIGNAL P	,		
1 1910	MODULATED SIGNAL A MODULATED SIGNAL B								

FIG 50



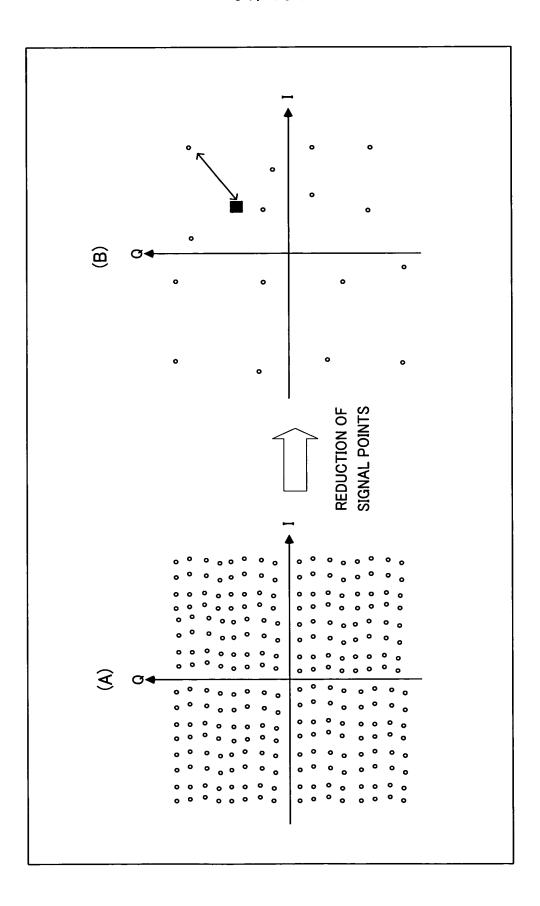
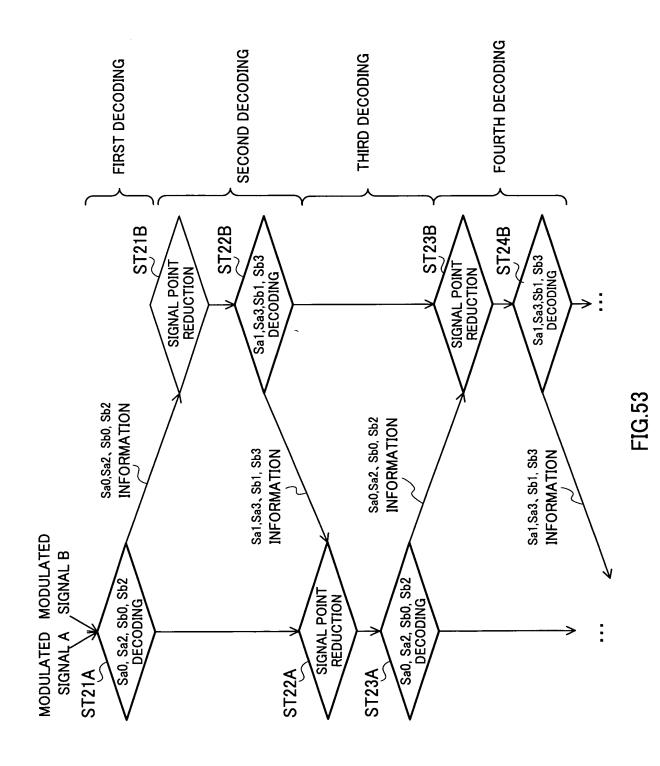


FIG.52



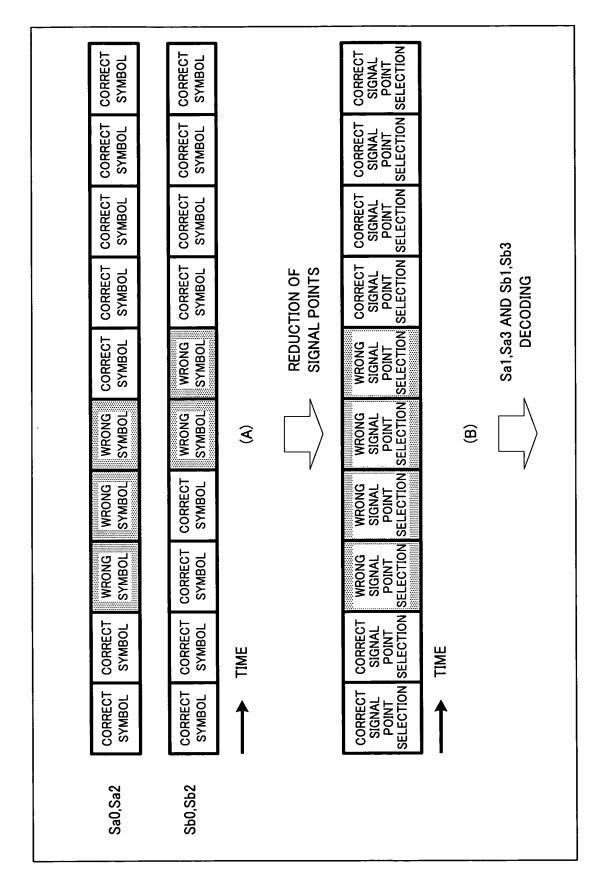


FIG.54

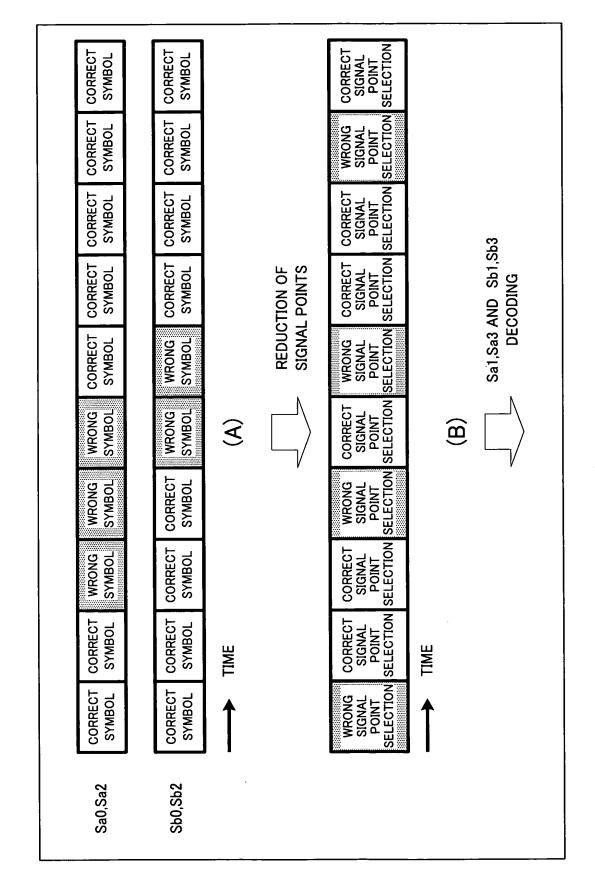
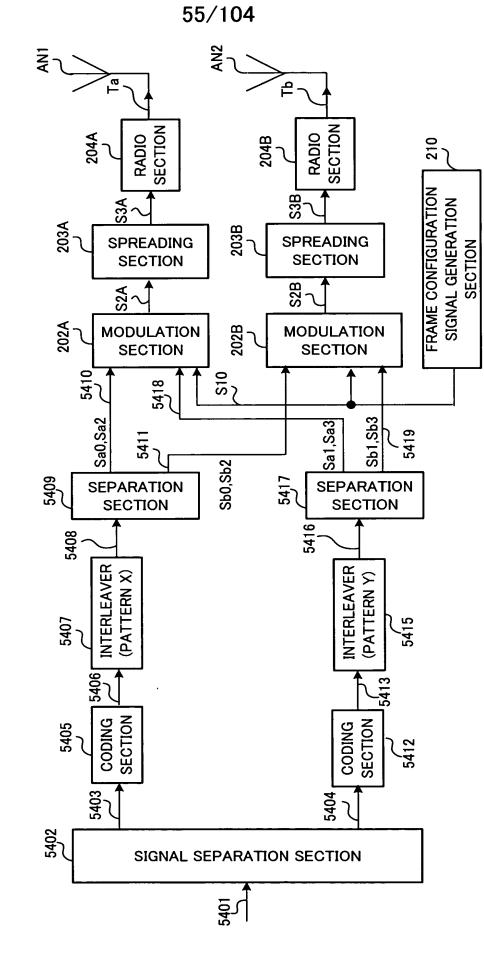


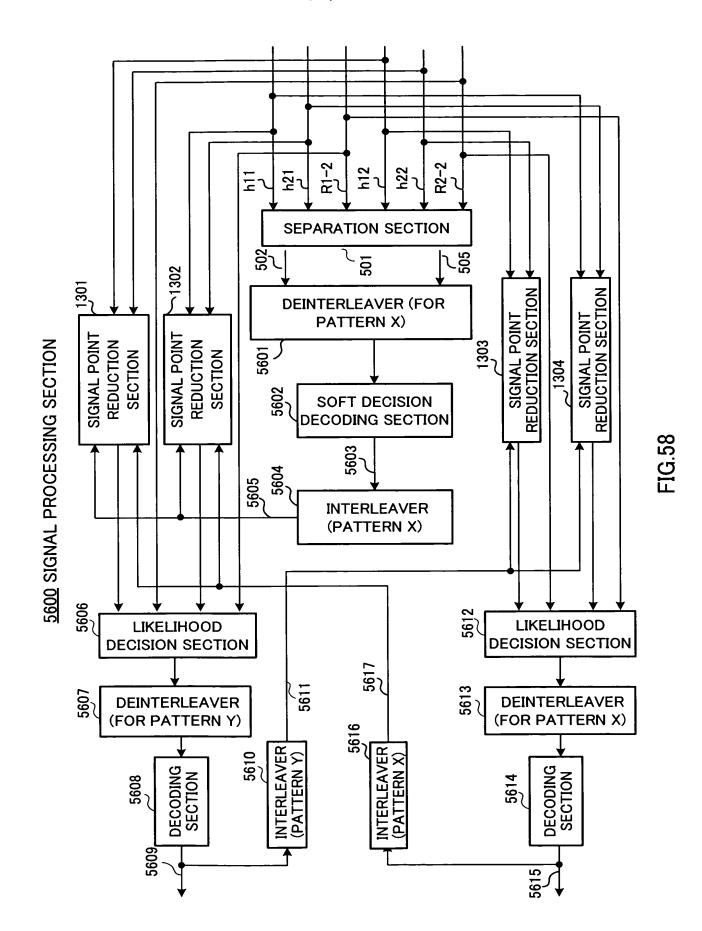
FIG.55



5400 MULTI-ANTENNA TRANSMISSION APPARATUS

BEFORE INTERLEAVING AFTER SA0,Sa2 Sb0,Sb2 BEFORE INTERLEAVING AFTER SA1,Sa3 DAT, SA1,Sb3 BAT, SA1,Sb3 BAT, SA1,Sb3 BAT, SA1,Sb3 BAT, SA1,Sb3	(A) INTERLEAVE PATTERN X	A DATA DATA DATA DATA DATA DATA DATA DA	A DATA DATA DATA DATA DATA DATA BATA DATA 6 11 16 200	A DATA DATA 195	A DATA DATA 190 200	(B) INTERLEAVE PATTERN Y	A DATA DATA DATA DATA DATA 2 3 4 197 198 199 200	A DATA DATA DATA DATA 9 17 25 200	A DATA DATA 192	A DATA DATA 200 184 200
		BEFORE DATA INTERLEAVING	AFTER DATA INTERLEAVING 1	Sa0,Sa2	Sb0,Sb2 6		BEFORE DATA INTERLEAVING	AFTER DATA INTERLEAVING	Sa1,Sa3	Sb1,Sb3 DATA

FIG.57



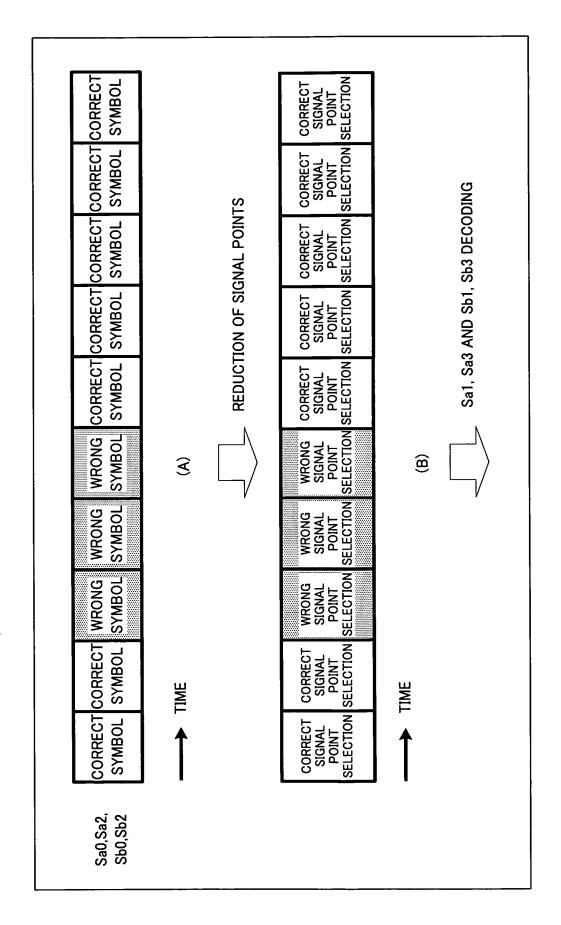
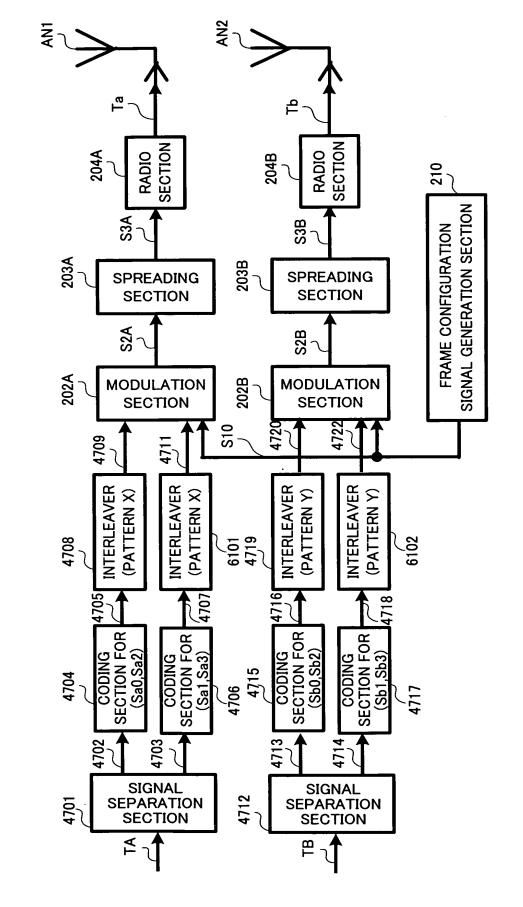


FIG.59

FIG.60

(A) INTERLEAVE PATTERN X	DATA DATA DATA DATA 199 200	DATA DATA DATA DATA 185 190 195 200	DATA DATA 185 195	DATA DATA 190 200	(B) INTERLEAVE PATTERN Y	DATA DATA DATA DATA 199 200	DATA DATA DATA DATA 192 200	DATA DATA 176 192	DATA DATA 184 200
	$ \begin{array}{c c} DATA & DATA & DATA \\ 1 & 2 & 3 & 4 \\ 4 \end{array} $	DATA DATA DATA DATA 16	DATA DATA	DATA DATA 6 16	(B) INTER	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	DATA DATA DATA DATA 17 25	DATA DATA	DATA DATA 9 25
	BEFORE INTERLEAVING	AFTER INTERLEAVING	Sa0,Sa2	Sa1,Sa3		BEFORE INTERLEAVING	AFTER INTERLEAVING	Sb0,Sb2	Sb1,Sb3

FIG.61



6100 MULTI-ANTENNA TRANSMISSION APPARATUS

FIG. 6.

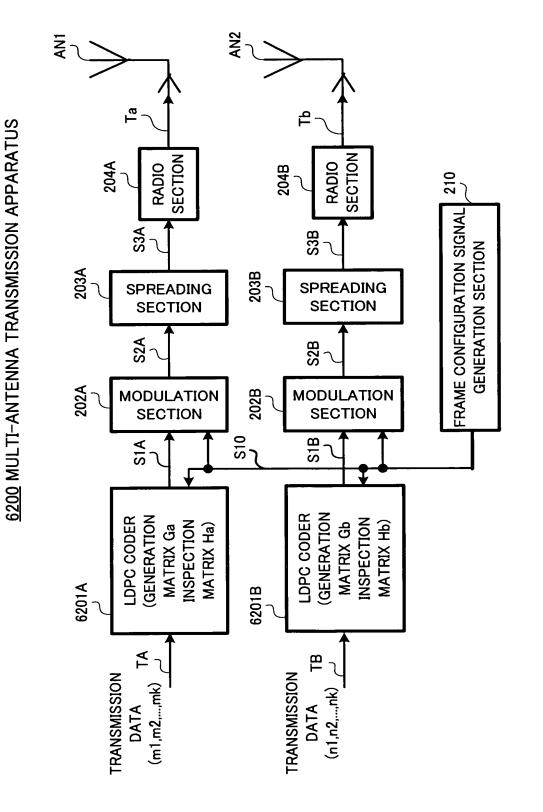
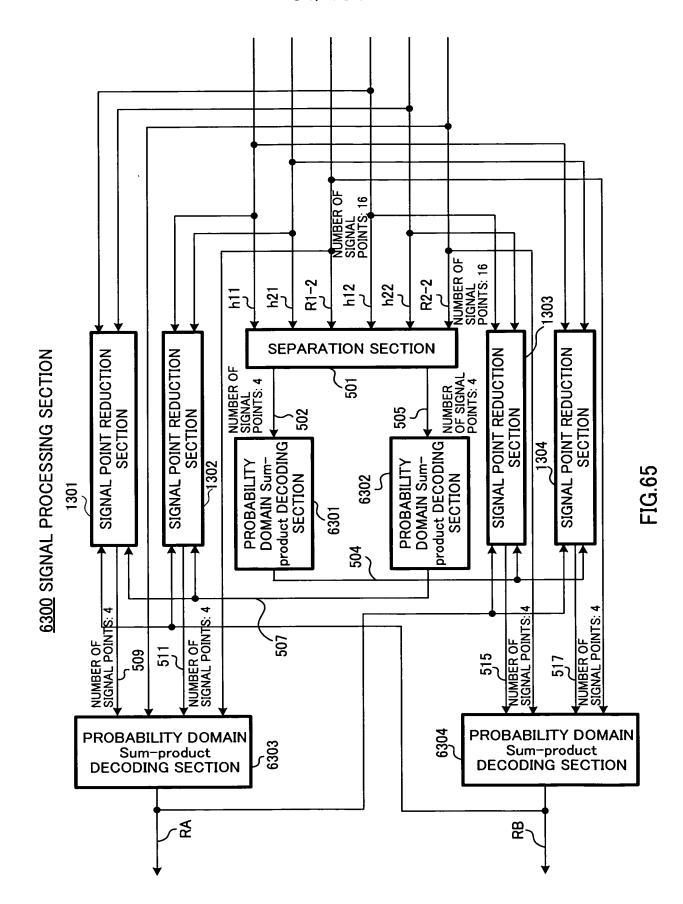


FIG.64



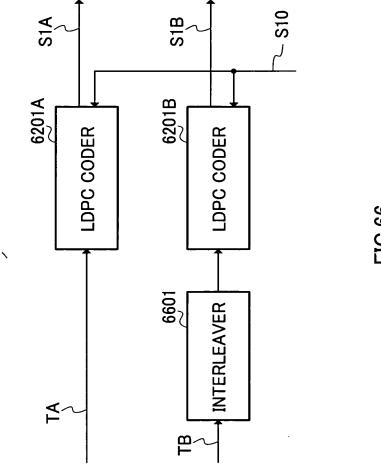


FIG.66

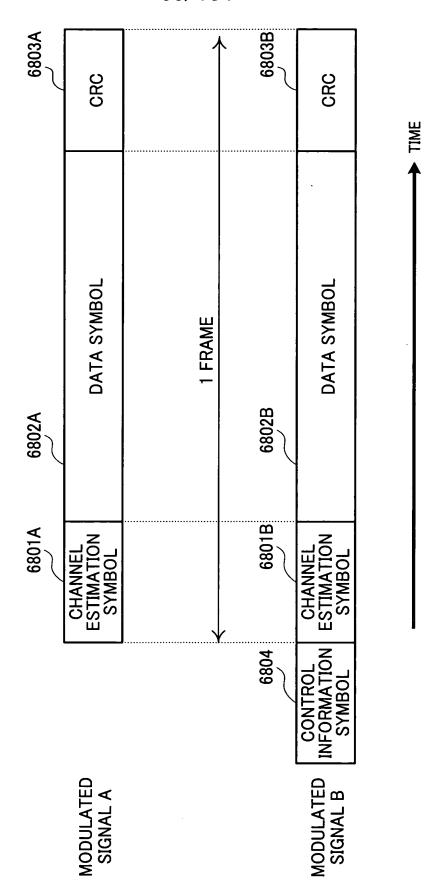


FIG.67

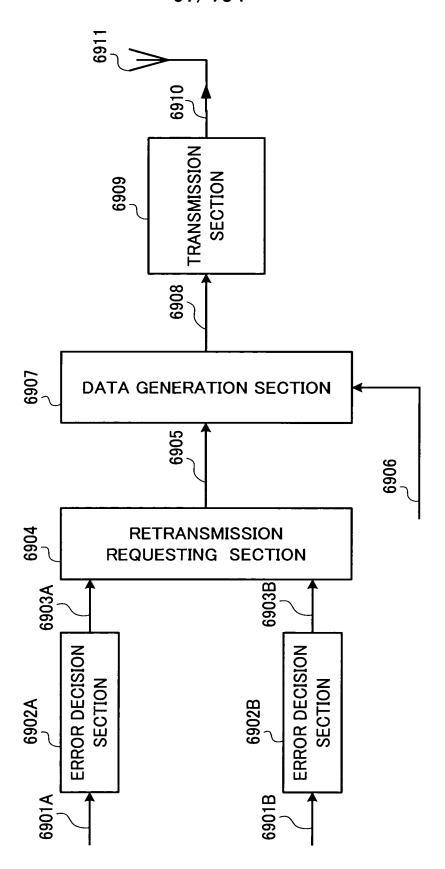
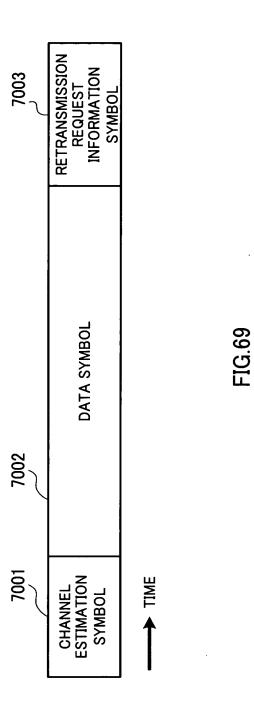
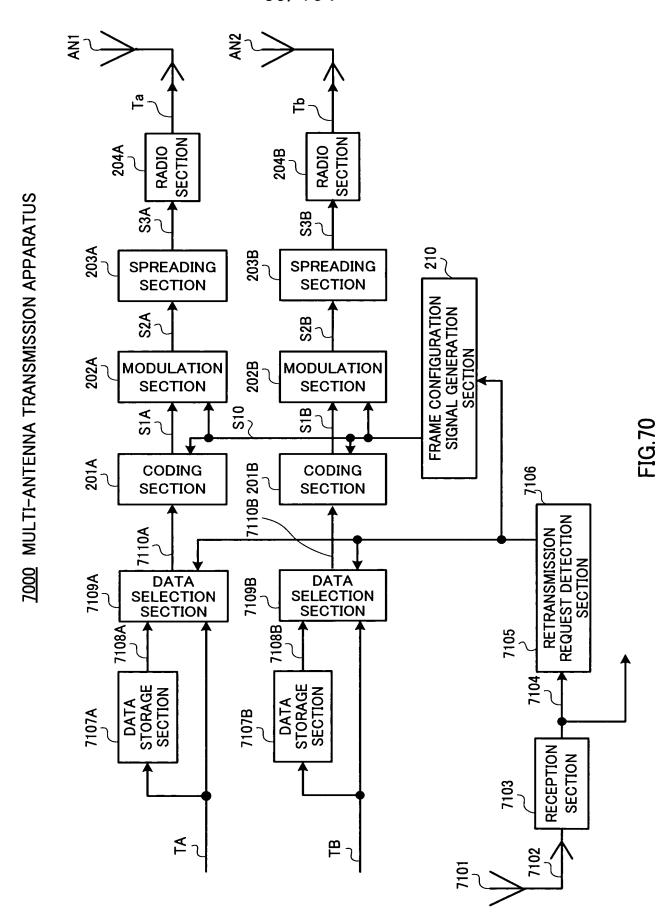
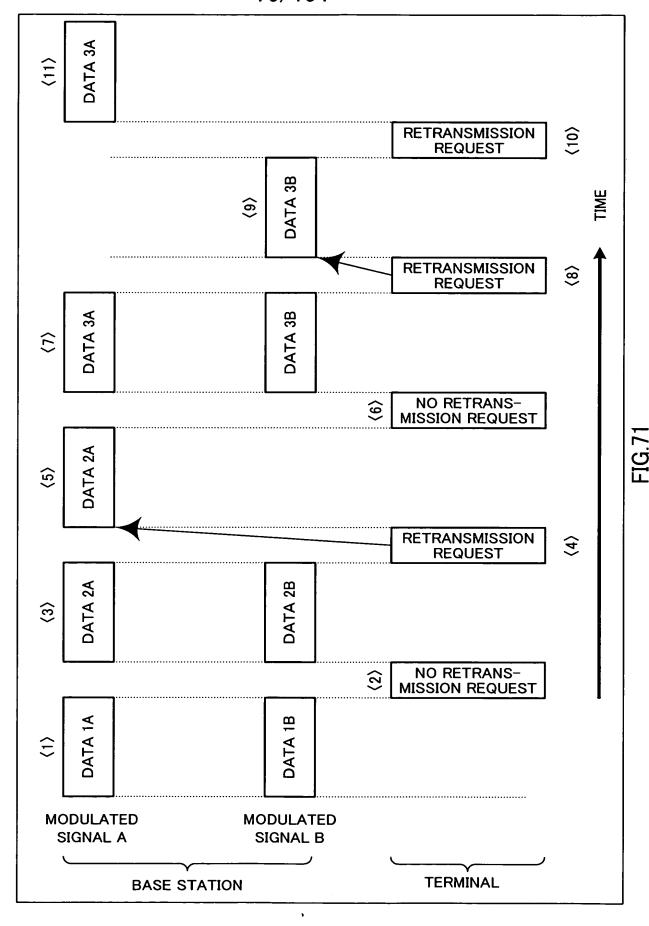
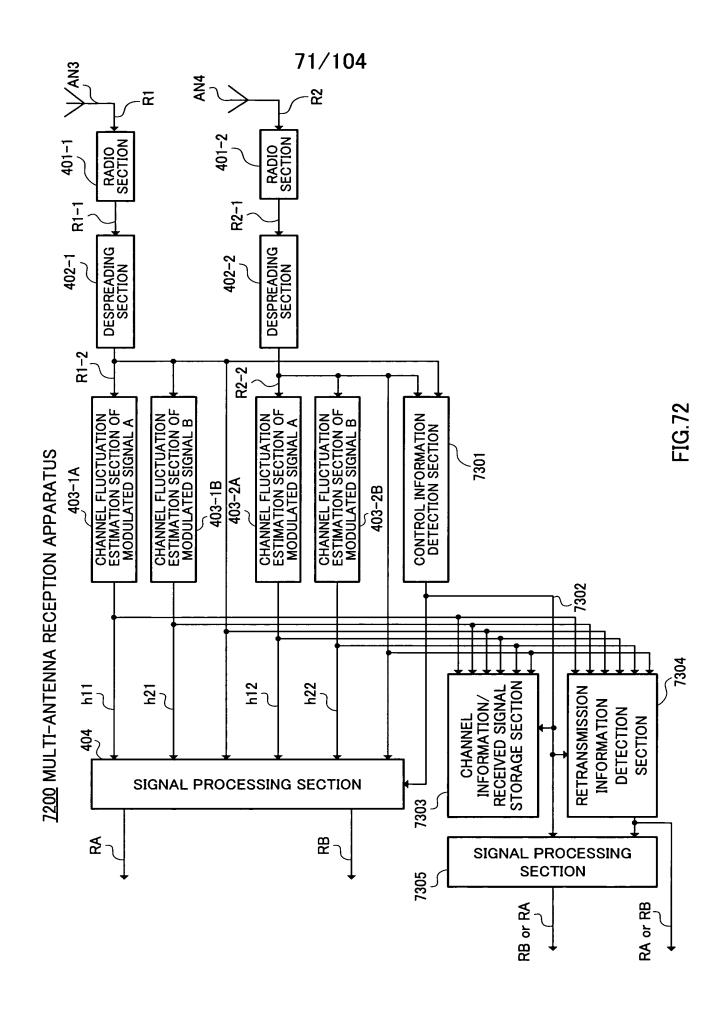


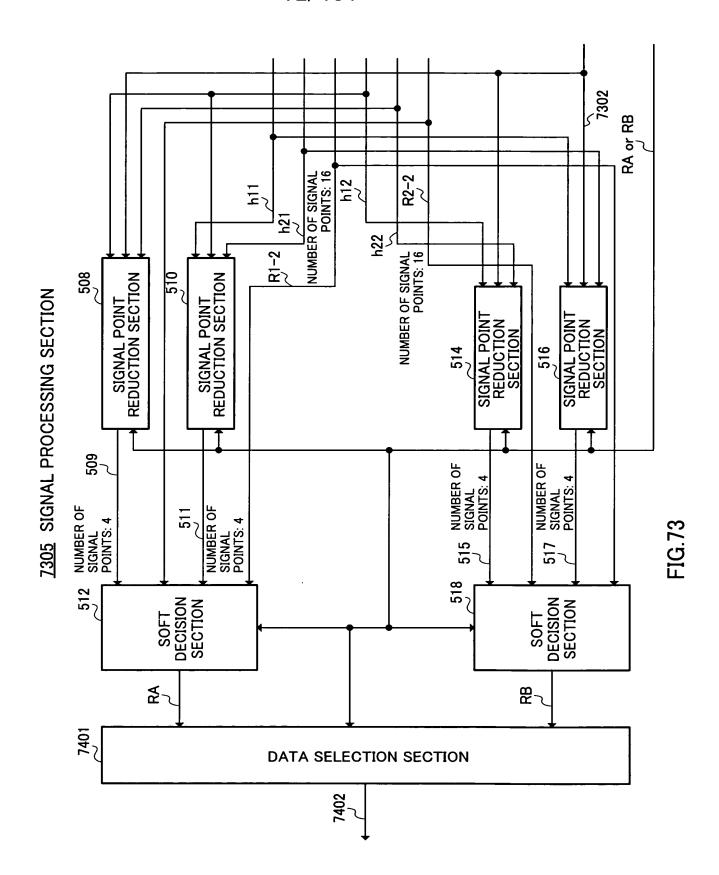
FIG.68











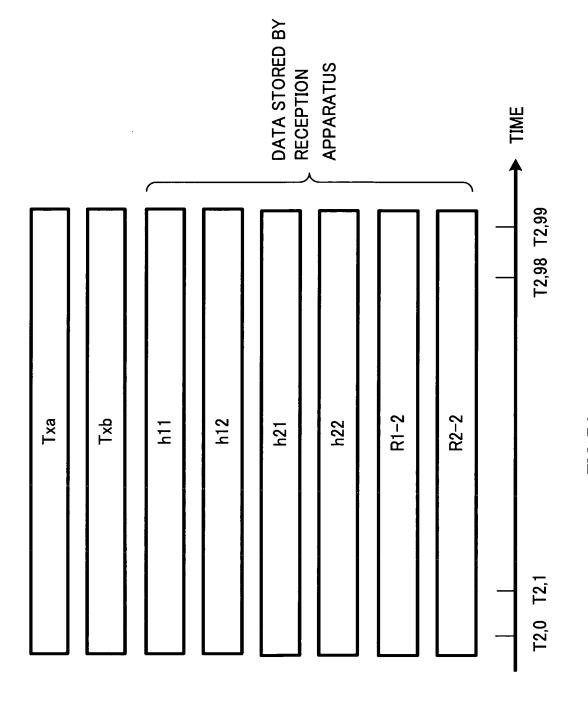


FIG.72

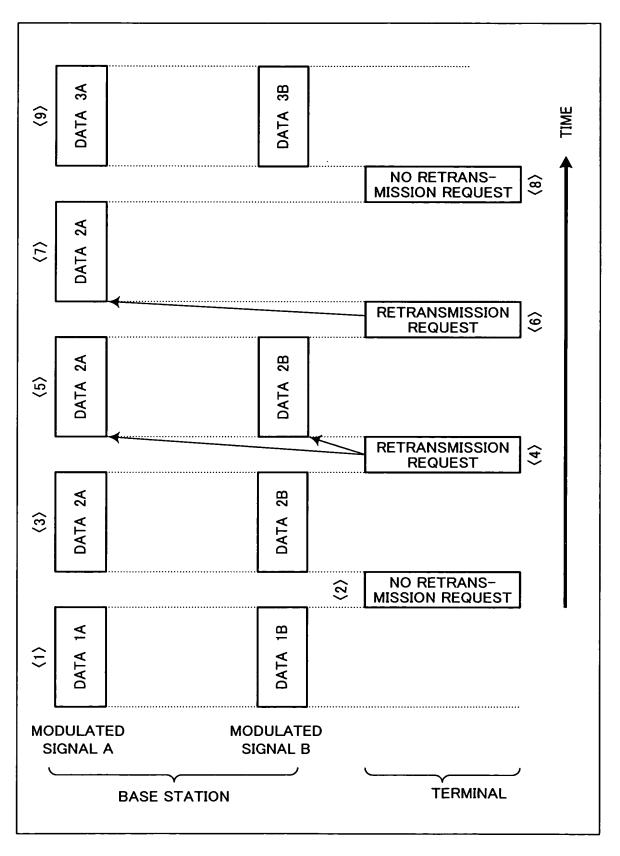
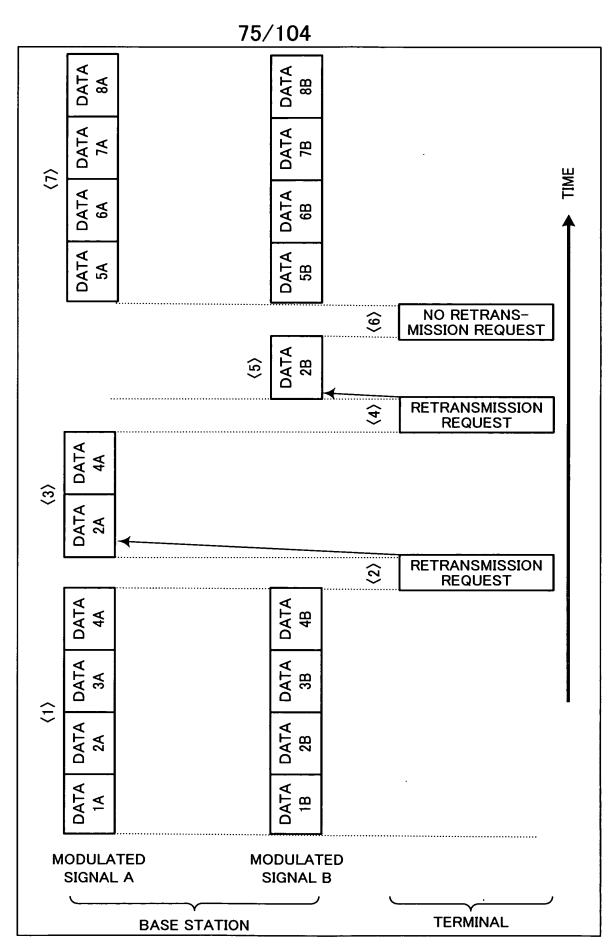


FIG.75



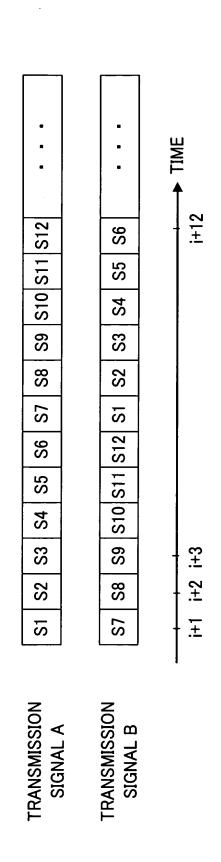
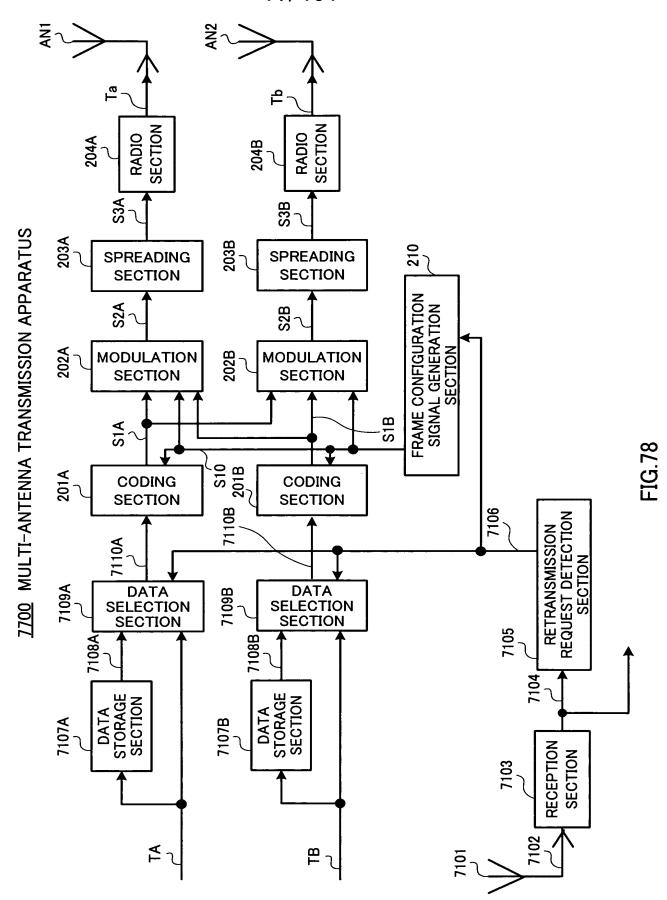


FIG.77



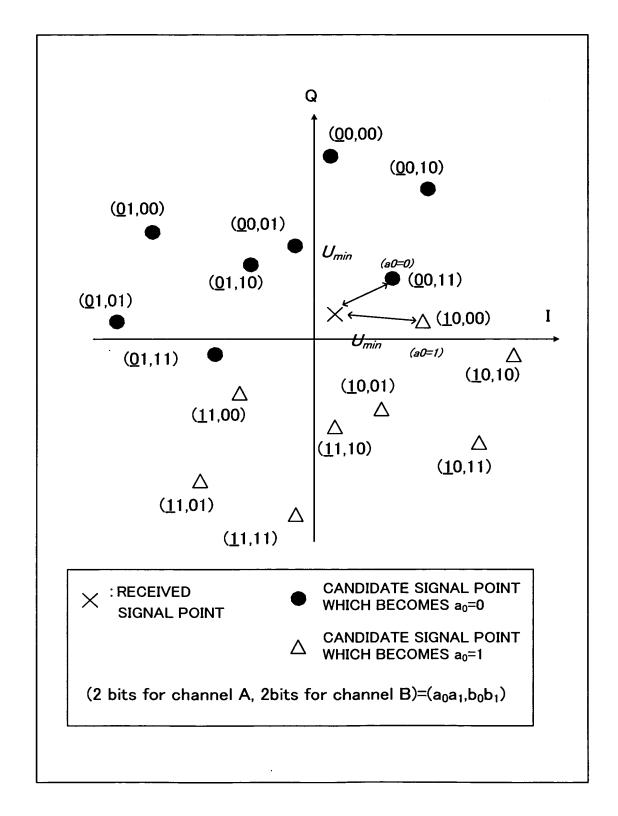


FIG.79

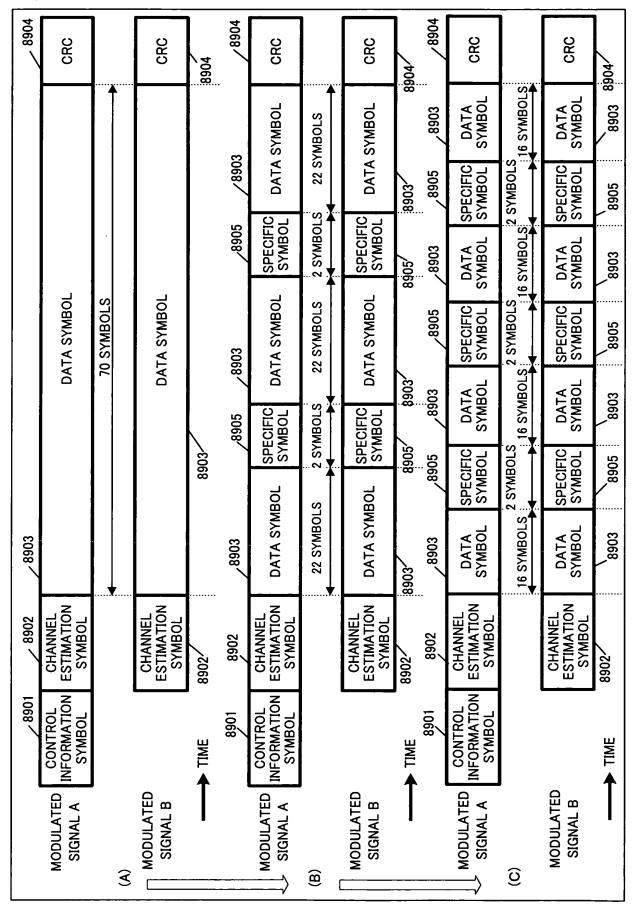


FIG.80

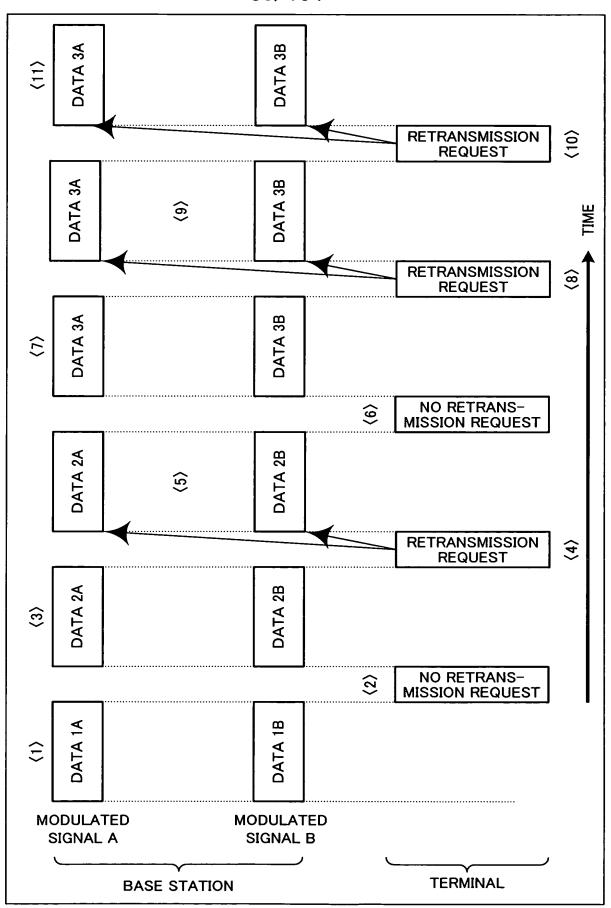


FIG 81

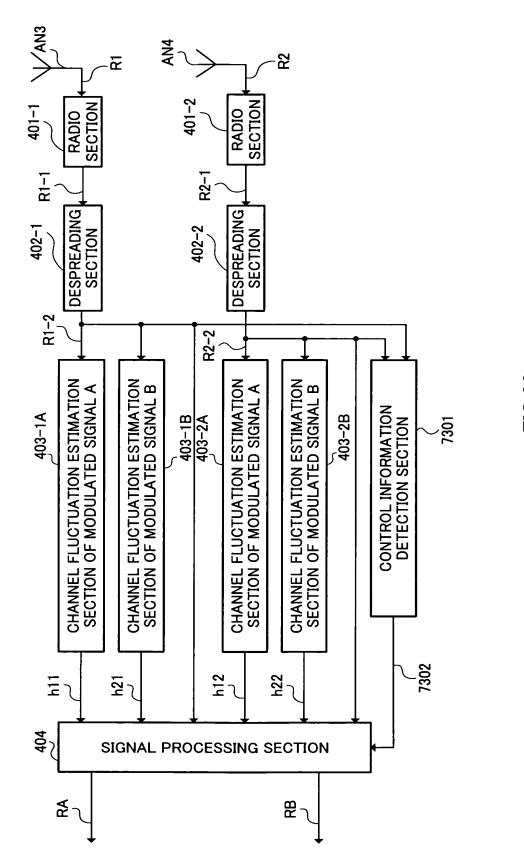


FIG.82

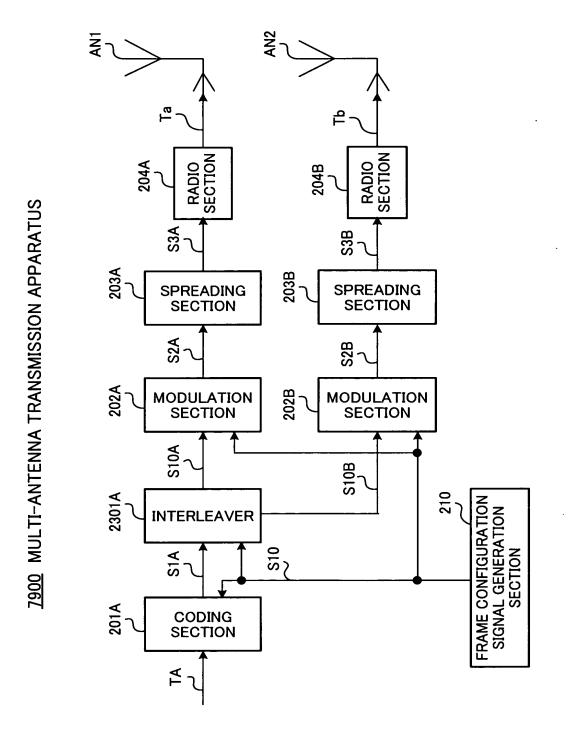
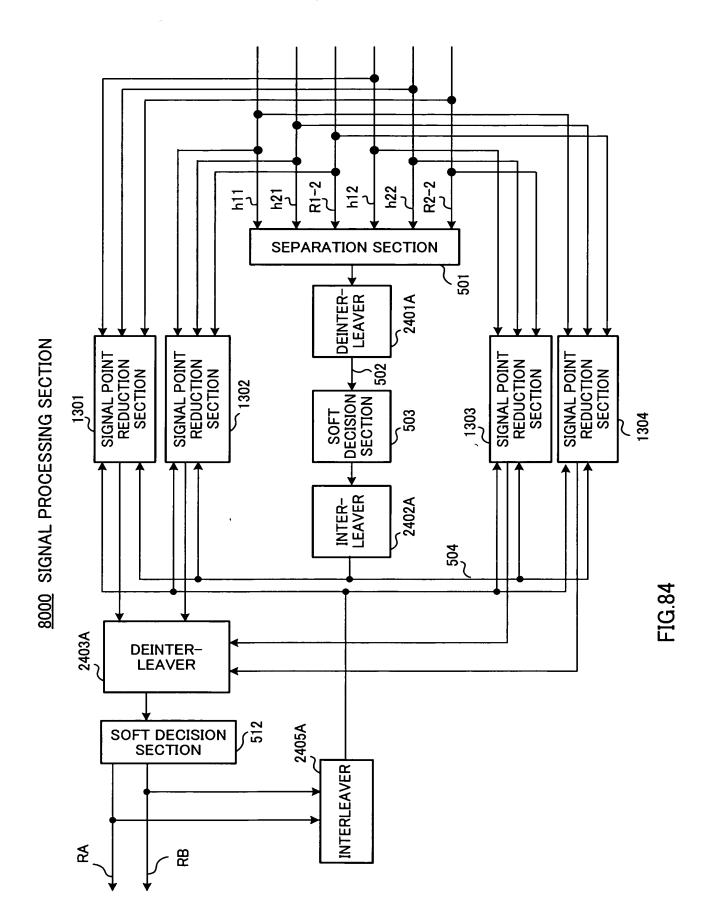


FIG.83



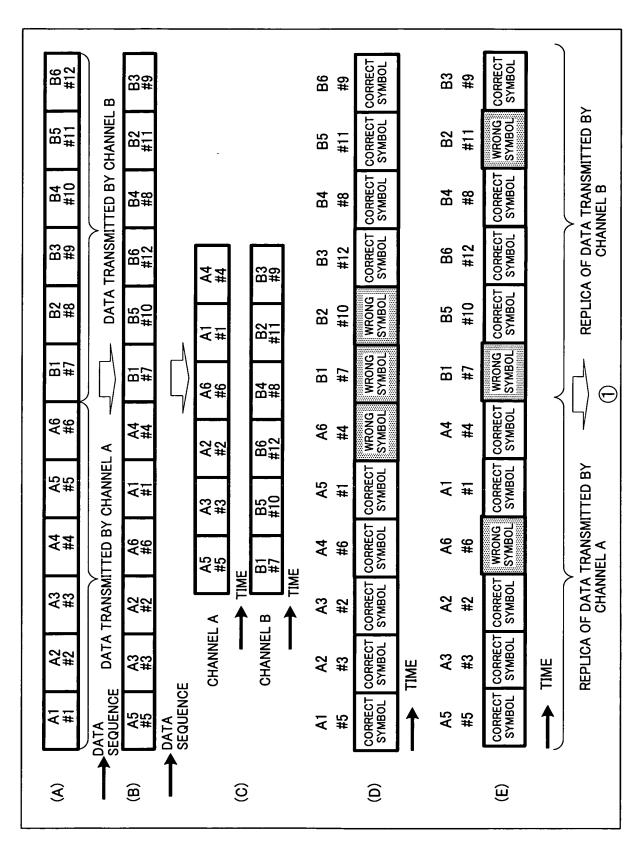


FIG.85-1

FIG.85-2

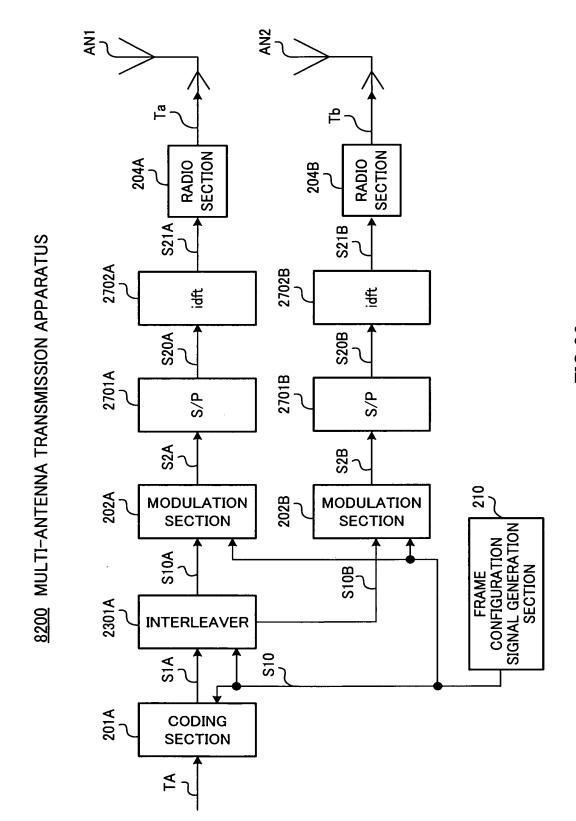


FIG.86

	ľ	07
83	CHANNEL B	
A3	CHANNEL A	
B2	CHANNEL B	
A2	CHANNEL A	
B1	CHANNEL B	DATA SEQUENCE
A1	CHANNEL A	1
	A2 B2 A3	CHANNEL B CHANNEL A CHANNEL B CHANNEL A

FIG.87

FIG.88

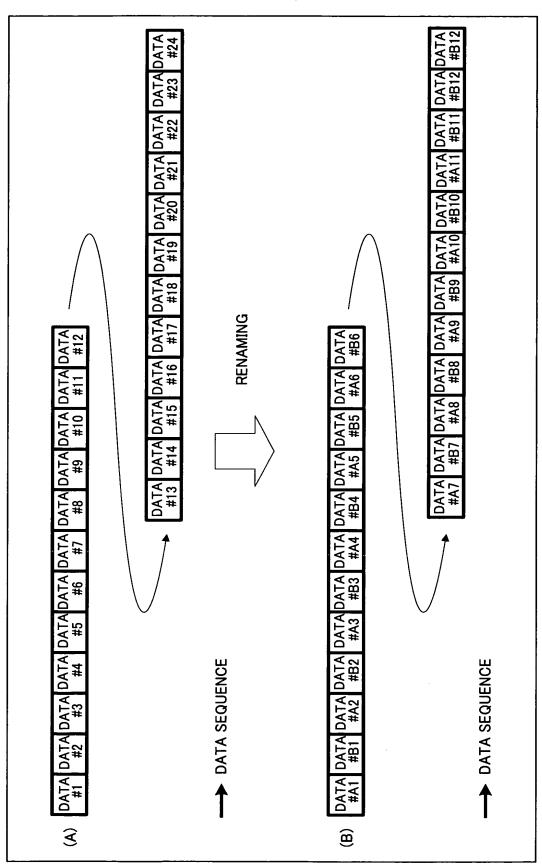
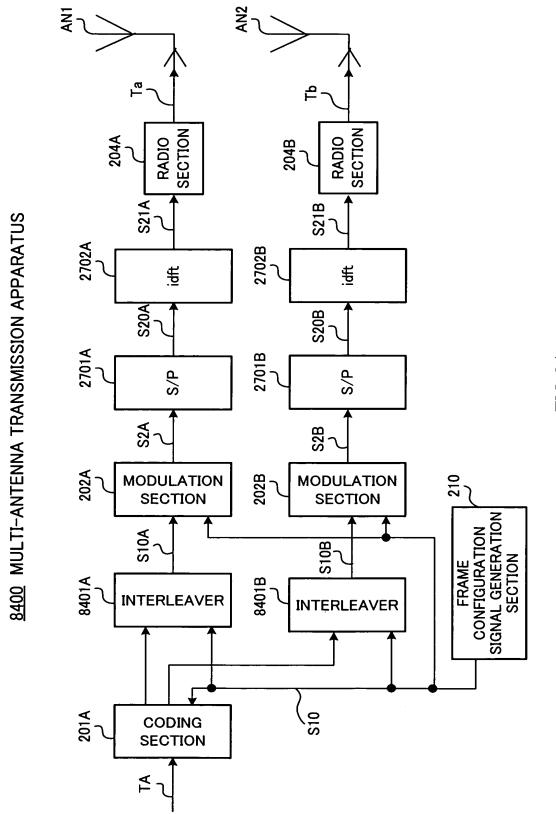


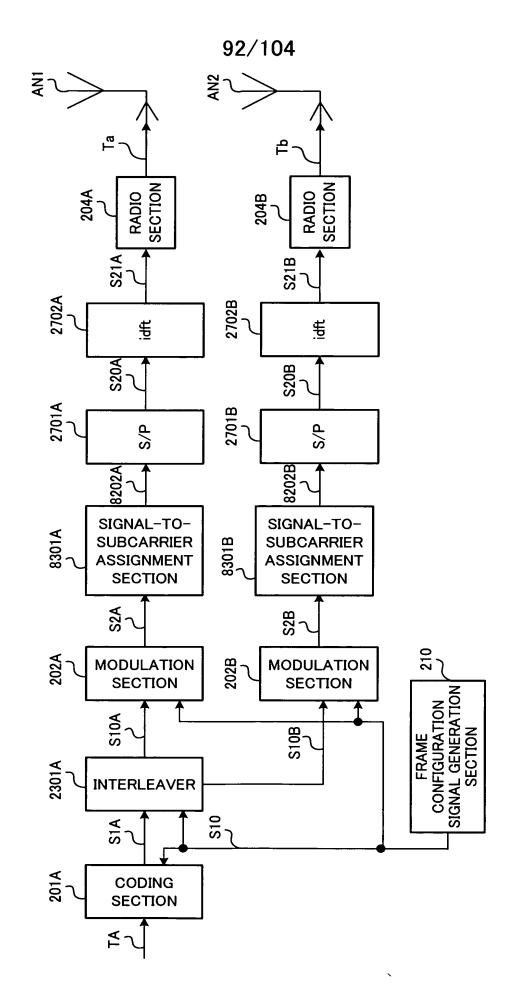
FIG.89

DATA DATA DATA DATA #A12 #A12	DATA DATA DATA B11 #B4 carrier 9 carrier 11 carrier 10 carrier 12	DATA DATA DATA DATA #A10	DATA DATA DATA #B3 #B7 #B11 CARRIER 9 CARRIER 1	DATA DATA DATA DATA #A12	DATA DATA DATA DATA #B11 #B4 #B10 #B5 #B11 CARRIER 9 CARRIER 11 CARRIER 12	DATA DATA DATA DATA #A5 #A10	DATA DATA DATA DATA B11 #B9 #B6 #B6 CARRIER 11 CARRIER 12 CARRIER 13 CAR
DATA #A7	DATA #B10 7 CARRIER	DATA #A7		DATA #A7	DATA #B9 7 CARRIER 8	DATA #A7	DATA #B12 7 CARRIER
DATA #A3	CARRIER 7	DATA #A3		DATA #A3	DATA #B3 CARRIER 7	DATA #A3	DATA #B1 carrier 7
DATA #A10	DATA #B2 SARRIER	DATA #A1	ம	DATA #A10	DATA #B8 #B8 carrier	DATA #A1	DATA DATA #B3 carrier 6
DATA #A6	DATA #B9 CARRIER 5	DATA #A12		DATA #A6	DATA #B2 carrier 5	DATA #A12	
DATA #A2	DATA #B5	DATA #A2		DATA #A2	DATA #B7 3 CARRIER	DATA #A2	DATA #B5
DATA #A9	DATA #B1 CARRIER 3	DATA #A11	DATA #B1 CARRIER 3	DATA #A9	DATA #B1 CARRIER 3	DATA #A11	DATA #B4 carrier 3
DATA #A5	DATA #B12 1 CARRIER	DATA #A9		DATA #A5	DATA #B12	DATA #A9	DATA #B8 1000 CARRIER
DATA #A1	DATA #B8 CARRIER 1	DATA #A6	DATA #B8 CARRIER 1	DATA #A1	DATA #B6 CARRIER 1	DATA #A6	DATA #B10 CARRIER 1
CHANNEL A	CHANNEL B #B8 CARRIER 1	CHANNEL A	CHANNEL B #B8 CARRIER 1	CHANNEL A	CHANNEL B #B6 ★B6 CARRIER 1	CHANNEL A	CHANNEL B #B10 CARRIER 1
3	3	(6)	<u>)</u>	(9	(<u>)</u>

FIG.90



-IC 91



8300 MULTI-ANTENNA TRANSMISSION APPARATUS

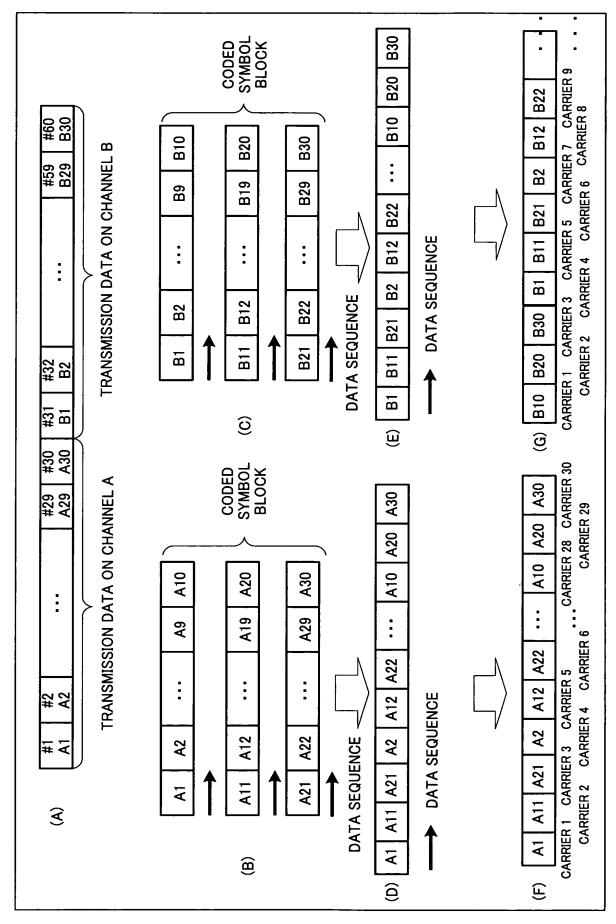
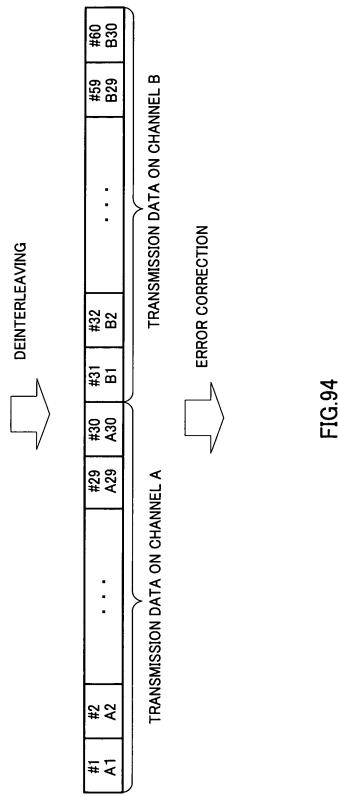
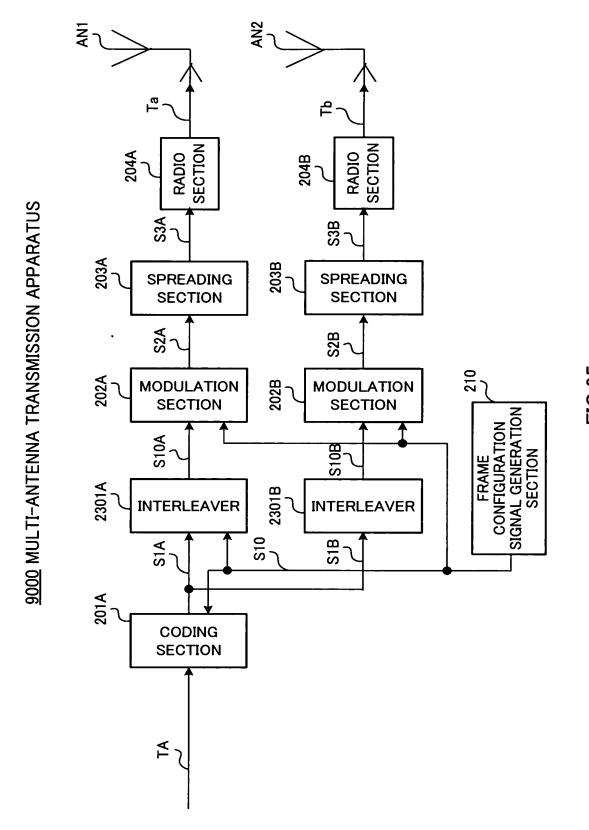


FIG.93





-IG.95

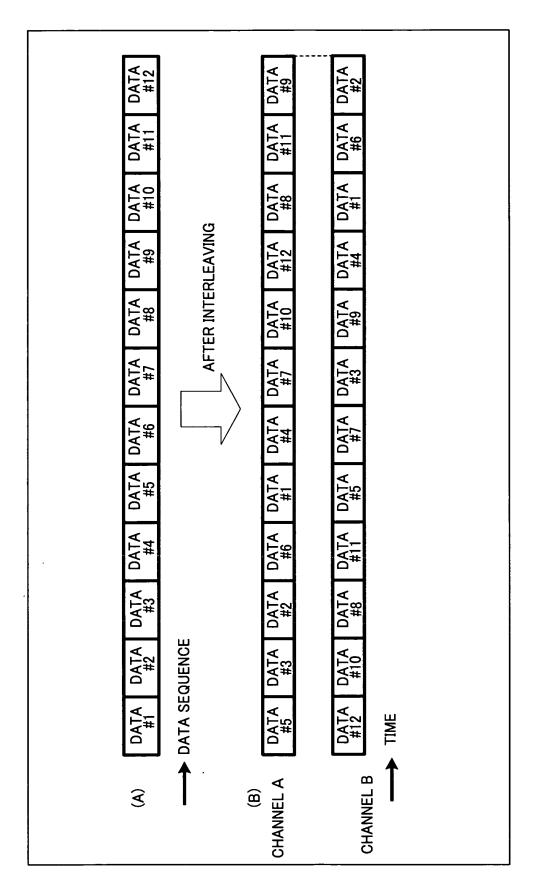
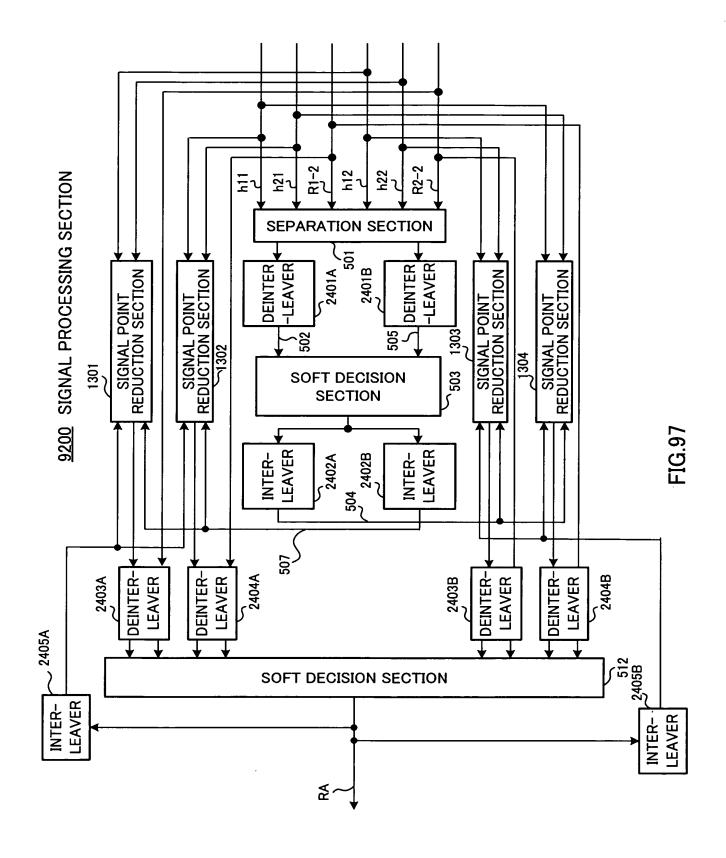


FIG.96



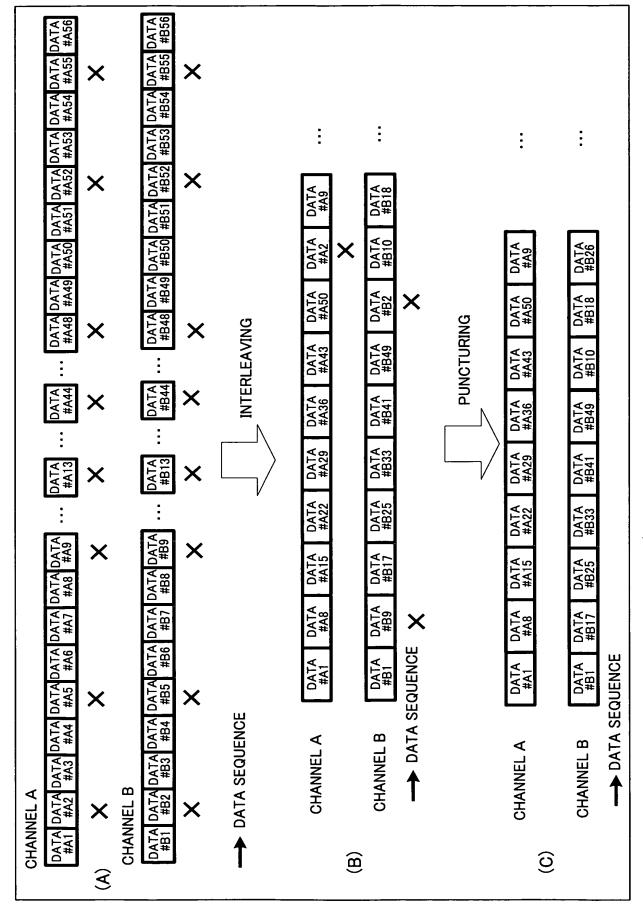


FIG.98

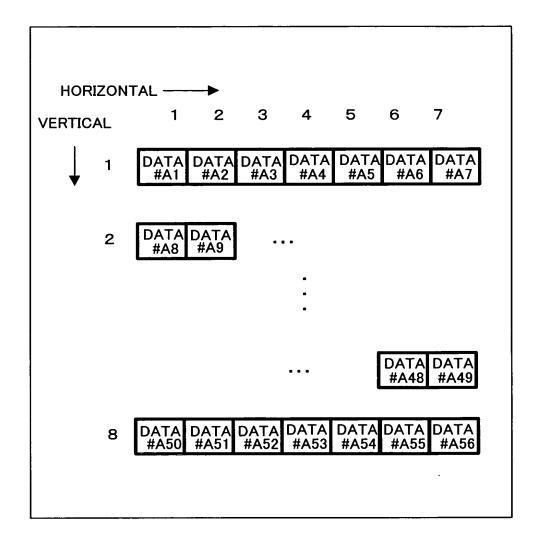
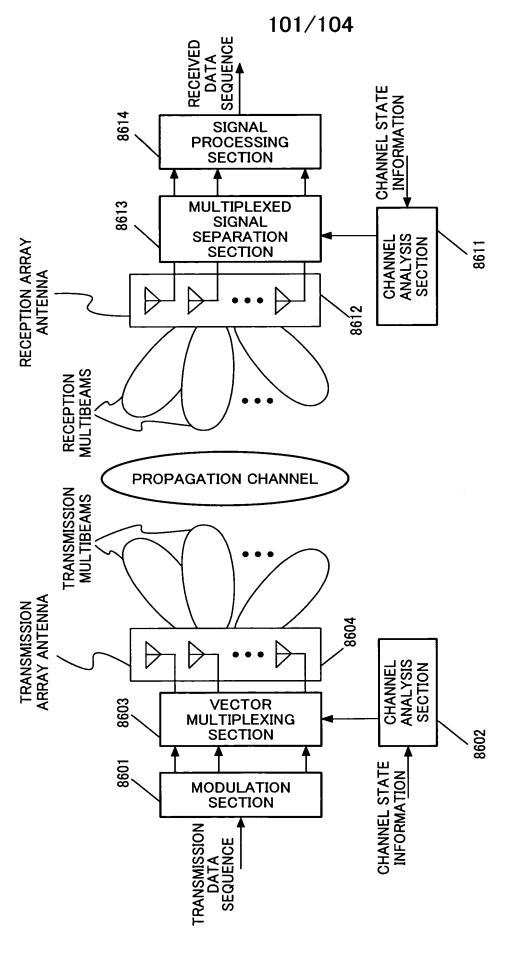


FIG.99

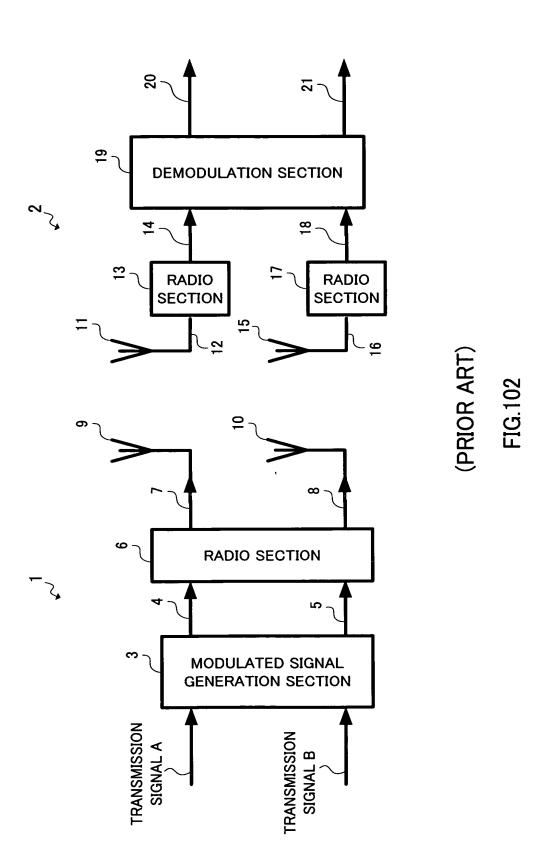
ď		. <u> </u>												•								
SE OF DAT, ABSENT) DATA		×	×	×	×	×	×	×	×	×	×	×	×	×	×		×	×	•	•	•	
ESENCE/ABSENCE OF D. (1: PRESENT 0: ABSENT) S FOR IRECTION		1	0	-	_	0	-	_	-		· 	-	_	0	-							
PRESENCE/ABSENCE OF DATA (1: PRESENT 0: ABSENT) ADDRESS FOR VERTICAL DIRECTION ▼ DATA	n bit	-	-	-	_	-	_	-	2	۰ ۵	2 2	2	2	2	2		က	က	•	•	•	
ADDRESS FOR HORIZONTAL DIRECTION	m bit	-	2	က	4	2	9	7	_	2	က	4	5	9	7			2				
		DATA#A1	DATA#A2	DATA#A3	DATA#A4	DATA#A5	DATA#A6	DATA#A7	DATA#A8	DATA#A9	DATA#A10	DATA#A11	DATA#A12	DATA#A13	DATA#A14	I	DATA#A15	DATA#A16	•	•	•	
			_	_							<u>ں</u>	<u>ت</u>										_

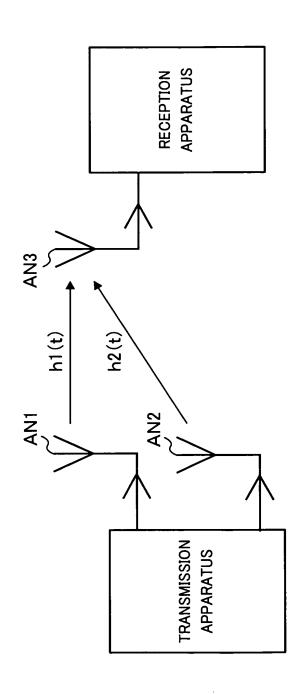
FIG. 100



J

-16.101





(PRIOR ART)

FIG.103

